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THE
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OF
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No. 1. Vol. X. JANUARY, 1917 [New Series.

The Society is not, as a body, responsible for the opinions expressed by individual authors and speakers.

The President, 1916-17.

Mr. Edwin J. Sadgrove, the President of The Society of Architects, received his early architectural training as a pupil in the office of Mr. A. J. Bolton, A.R.I.B.A., of London, and afterwards served him as chief assistant. Realising the importance to an architect of a practical knowledge of quantity surveying, in addition to his other qualifications, he afterwards applied himself to acquiring proficiency in this branch of his profession also.

He commenced practice in London in 1887, his work being largely buildings of a domestic and commercial character, which have been erected from his designs in London and various other parts of the country. He has specialised in bonded tobacco factories.

Mr. Sadgrove joined the Society in 1901, and from the first took an active part in its proceedings, and in 1906 was elected a member of the Council. His regular and constant attention to his duties, soon marked him out for higher office, and he filled the position of Hon. Treasurer with much advantage to the Society. He was elected a Vice-President in 1914, and President in 1916.

His services are frequently requisitioned as an arbitrator in building disputes, for which position he has shown himself to possess by temperament and training those qualities which, combined with a practical knowledge of the subject involved, are necessary to the promulgation of an impartial and sound judgment between the parties concerned.

The President's interests in life are not confined only to his activity in professional matters; he possesses and has developed an inventive faculty which has

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enabled him to evolve several well-known patented appliances and substances connected with the equipment, repair, and decoration of buildings.

The war caused him to turn this talent to further account in connection with inventions for the destruction and also the preservation of life in warfare. A wholesome respect for the Defence of the Realm Act renders any detailed allusion to this subject undesirable.

It might be appropriate to mention here that both the President's sons are serving in H.M. Forces.

Mr. Sadgrove is a Fellow of the Royal Institute of British Architects and of the Institute of Arbitrators. He is a Founder, Past Master, and Treasurer of The Society of Architects Masonic Lodge, and has attained London Rank.

Reviews.

The Builder's Foreman: A Practical Guide to his Training, together with useful data on the Organisation, Management, and Erection of Building works, based upon an extensive experience in the supervision of large contracts. By J. F. Outram. With 120 illustrations. London: B. T. Batsford, Ltd., 1916. Price 5*s.* net.

The advice given in this book is shrewd and practical, and worthy of the closest attention by all aspirants to the position of builder's foreman. Having been "through the mill" himself, the author knows just what points to enforce. Although not written for architects, the information given is exceedingly valuable to them, enabling them to realise some of the difficulties the builder encounters and how they are overcome. Detailed instructions are given relating to the work of starting a contract; clearing the ground; digging the trenches; putting in foundations, including under-pinning; setting out the work both in small buildings and large ones, including steel-framed buildings; and the management of plant. The latter item is followed by complete sketches and measurements for the construction of a derrick staging, cheap roof principle and a brick skip. Chapter XII. is devoted to Arithmetic and Geometry, and Chapters XIII. and XIV. to Levelling and Theodolite work. Having gone carefully through the book we have nothing but praise to award, and congratulate the publishers upon having secured such a useful addition to their list of technical works.

Model Drawing, Geometrical and Perspective, with Architectural Examples. By C. Octavius Wright and W. Arthur Rudd. Cambridge: at the University Press, 1916.

It is a pity that the latter part of the title of his work, and a good deal of the matter thereunder, was not omitted; for the book is excellent so far as it instructs in model drawing. On the other hand, the half-knowledge displayed by the numerous references to architecture is exceedingly misleading, while of several of the illustrations it can only be said that they indicate crass ignorance, especially of the construction on which all architecture is based. This is the more deplorable because the draughtsmanship is captivating at first sight, though not necessarily perfect. Possibly the most glaring example is the portcullis shown in Fig. 47. No mediæval castle builder would have thought for a moment of hanging so solid a dropping gate behind so thin a screen of masonry, nor would he have so arranged matters that the gate, when falling, would strike and break away the upper member of a capital. The outer capital on the left also occurs where it would never be found, and the capitals on either side of the opening are not perspectively at the same level, while the mouldings to right and left of the centre of the arch differ hopelessly from one another. This may be the way to sketch rapidly for effect, in order to illustrate a cheap newspaper, but it is poor teaching in accurate model drawing.

MR. EDWIN J. SADGROVE, F.R.I.B.A., PRESIDENT OF THE SOCIETY OF ARCHITECTS, 1916-17.

The Society of Architects.

ADDRESS BY THE PRESIDENT, MR. EDWIN SADGROVE, F.R.I.B.A.

November, 16th, 1916.

I have been elected to the position of President at a period when our country has been at war with the common enemy for over two years, our eligible members are serving in H.M. Forces, and the rest of us are engaged in other forms of war service. In addition we are trying to cope with the many difficulties incidental to carrying on our prefession, and also endeavouring to help our absent colleagues, so that they may give their whole mind to the task before them, knowing that we who are compelled to stay at home will do our best to look after their professional interests and affairs while they are fighting.

Architects are bearing cheerfully at least as heavy a burden as any other section of the community, recognising that the nation's first business is to win its way to such a decisive and lasting peace as will preclude for ever the possibility of a recurrence of such another upheaval. All matters of professional and personal interest are being made subservient to this end. To the members serving in H.M. Forces and those engaged in the production of munitions or employed on any work tending to the shortening of the war or the upholding of the commercial supremacy of the country I raise my hat in admiration and appreciation. But is it certain that all of us, and especially those over military age, are "pulling their weight"; and are there not still some who consider it derogatory to their professional dignity to get away temporarily from tradition and divert their professional abilities and energies into other and more immediately urgent channels for the good of the national interests? Even if their efforts only result in the release of a fighting man, or the keeping of a civilian off the funds of War Relief Institutions, it is something towards the sum total of man power.

To any such who may be waiting, Micawber-like, for something to turn up, I commend the example of an architect who, having ascertained that a War Department was in need of technical assistance in the purchase of war material, induced them to give him a trial. He justified himself, and is now chief of a large staff in which are other architects and surveyors, and he has saved the country a large sum of money by the methods and systems which he introduced.

I am aware that many architects have tried unsuccesfully to obtain Government employment of any kind in which their professional services might be utilised in the interests of the country at the present juncture. There is, however, still something to be said for the man who does not wait for opportunity, but, like Napoleon, makes it. What I want to emphasise is the need for each of us, according to our individual capacity, to go all out for the end in view.

An architect is no less an architect because he has temporarily exchanged the T-square for the rifle, and the same argument holds good in other forms of war service, and we shall none of us be worse architects after the war for having had our outlook widened and our views on some matters modified or enlarged, as the case may be, by the experiences and trials through which we are passing.

I now pass from generalities to more concrete matters relating to the Society and its opportunities for further expansion and work at the present time, and I hope to make some suggestions which may lead to development and useful results in the near future. Any views which I may express are my own, and while I do not seek to bind theCouncil, some of the points raised may possibly be found worthy of consideration by that body. In the multitude of councillors there is wisdom, and it may be that some of the ideas here put forward in what perhaps may be considered a crude and unfinished form may be found to contain the germ of something which may tend to solve or alleviate some of the problems and abuses with which we are faced as a profession.

It is unthinkable that the war should be considered a blessing, but it has had the good effect of putting a stop for the time being to all discussions within this profession relating to architectural politics and of consolidating the members into one body with one end in view.

During all this period there has been at the back of the Society's mind the feeling that the time was opportune for a discussion with the R.I.B.A. of certain points at issue relating to matters of professional interest with a view of finding some common grounds of agreement and obviating the necessity for raising contentious questions on these matters in the future.

In regard to registration, for instance, it is not the principle but its scope and the method of carrying it into effect upon which we are divided. There is also a good deal to be said in favour of the standardisation of forms of contract and other professional documents, and the prevention of over-lapping generally.

The Society therefore approached the Council of the R.I.B.A., suggesting a conference of represenatives, and in due course received a reply to the effect that the Council of the R.I.B.A. was precluded from discussing controversial questions during the war by the pledges given to the general body of its members.

To me it seemed a humiliating confession of weakness to have to admit such a want of confidence in the Council by the general body of members as is shown by the reply of the R.I.B.A. to the Society's proposal.

It raises the question: Is the Society to stand still during the war and take no further steps in what we consider to be the interests of our members and of the profession? I say emphatically No, and that we ought during this coming session to consider how best we can proceed with our schemes, if possible without disturbing the friendly relations which so happily exist between ourselves and other professional bodies at the present time.

I merely mention the foregoing incident to show our friends, who sometimes criticise us for acting independently, that the Society has made overtures for co-operation, well knowing the delicacy and difficulty of the task it undertook. The Council being itself unhampered by restrictions imposed by the members, and its overtures not being successful, it is unreasonable on the part of our friends to expect that we can do otherwise than proceed on our way with the consciousness of having first done everything possible to bring about the co-operation and unity of action which we desire to secure.

In regard to registration, there are architects whose opinions we value who hold that to seek statutory powers for this purpose is to level down the profession, and that the way to accomplish our object is to level up by beginning at the top and raising the standard of education and qualification. These good friends overlook the fact that the full title and intention of the Society's Bill is "The Statutory Education and Registration of Architects." First educate your architect, and registration becomes merely the mechanical process necessary to give him the assurance that having spent much time and money on his education he will not have waster either, as is the too common experience at the present time. Voluntary education does not go far enough; it holds out no certainty, and gives little encouragement to persevere, simply because anyone can purport to practise as an architect without passing examinations or possessing any qualifications. Human nature being what it is, there must be compulsory education in any registration scheme planned to cover the whole field, and not to cater for one section only of the profession.

The Society's proposed Act is not yet on the Statute Book, but the recent changes and developments in the trend of architectural education and training in Great Britain can be traced very largely to the activity and foresight of the Society in pegging away in season and out on this question of education and registration.

There are usually two ways of accomplishing a thing, and opposition to a sound scheme not only stimulates its promoters to further effort on their own lines, but induces the opposition to suggest and adopt other means by which in their opinion the object may be attained, if by a longer route. That is what is taking place at the present time in this matter, and the Society can fairly say that its efforts in the cause of architectural education and registration are already bearing fruit.

The Registration Bill is still in its draft stage, and while it embodies a principle which has never been abrogated, it is in my view somewhat unwieldy on a few points of detail, and I think a Committee of the Council might very well usefully occupy its time in re-drafting the Bill on certain main lines which I do not propose to touch upon here, but which would, I believe, have the effect of producing a measure acceptable to the large majority of those who do not at present see eye to eye with us on certain points.

I see here great possibilities ahead for future developments and progress.

The Society's Form of Building Contract has been on the stocks for some time, and we have now, owing to circumstances previously referred to, only to decide in principle whether it is to be issued or not for some further progress to be made.

I do not myself see that the Council have any alternative but to comply with the members' request for the issue of the document.

After all, it is intended merely as a basis upon which building contracts may be framed. It is admittedly in advance of any document of its kind, and I hope to see some further progress in this direction before very long.

The question of an amendment to the law of Ancient Lights on lines suggested by the Society years ago has been revived outside the Society. This is a healthy sign, and presumably those who are agitating in this direction would be prepared to co-operate with the Society and other interested bodies. The appointment of a Tribunal for the settlement of contentious points in advance ought to appeal to all concerned, and should not be beyond the powers of the profession to accomplish. It is another matter which might well receive consideration by the Council during the war.

The present scale of architects' fees is altogether inadequate, in my opinion, and, apart from this, it appears to me to be wrong in principle for an architect to be paid on a commission basis for obvious reasons which I need not labour here. What is wanted is not a revision of the present scale so much as an alteration in the system of charging. Here is another problem for the Society; and there is also the question of conditions of competition, in itself a very large subject to tackle.

Another matter which the Society is already dealing with is the question of new methods of construction, the more extended use of by-products in connection therewith, and the local manufacture and utilisation of certain materials for use in building. This may involve extensive scientific research, and the Society is co-operating in this direction with the Government Research Committee.

The deeper one goes into this matter, which is one intimately connected with reducing the cost of building, the more one is impressed with the necessity for some relaxation of local building by-laws and for more elasticity in their scope and application.

These regulations must be adapted to modern requirements and made so elastic as to cover and provide for new developments, and so obviate the necessity of making amendments to the regulations from time to time to meet special circumstances.

Local Authorities should be given greater discretionary powers within their areas.

I feel sure that with a little organisation and co-operation between professional bodies it would be possible to impress upon the Local Government Board the desirability of making changes in the direction indicated.

There is just one other matter which may fall within the scope of the Society to take up, and that is the proper acknowledgment of the architect in any publicity relating to a building for the design and erection of which he is responsible.

One frequently sees the announcement in the Press of the formal opening of a building where everyone concerned is in the limelight except the architect.

Possibly architects are themselves to blame for this sort of thing in not insisting on proper recognition. But why should they be more diffident than other artists? The architect can only be known by his works if his name is associated with them, and it might be well for all concerned if this association could be of a permanent character for all to see, so that by his works he could be judged as well as known.

However that may be, I think it is the duty of architects to see that on such occasions the profession which they represent should have a place of honour.

The Society has been in existence for thirty-two years, and was founded for the purpose of bringing about certain reforms, principally Registration at that time, but other pressing questions have arisen and developed in the meantime.

The way of reformers is proverbially hard, and the Society has had to outlive much misrepresentation and prejudice, and to learn to take and to give hard knocks in pursuit of its objects. The fact that after two years of working under war conditions it finds itself with its membership practically undiminished and its financial position enhanced is in itself evidence of the businesslike way in which its affairs have been and are being handled. The Society has established a reputation as a factor and influence to be reckoned with in professional matters out of all proportion to its comparatively small membership. And that brings me to a point which I want to emphasise.

It is obvious that in order to accomplish any one of the reforms indicated we must have more and more members. Numerical weight as well as quality is what counts in the public eye, and when one is dealing with matters of such import as Registration, to take only one subject, it is essential to be able to demonstrate that those who support the principle embodied in the Bill support also the Society which promotes it. Letters of sympathy and support are very pleasant, but they do not help to foot the bill, and every one of these architects ought to have sufficient courage to back their opinion by becoming members of the Society.

This may be considered by some an inopportunte time in which to raise the question of increasing the membership. I would only say that if the initial outlay is the chief disability there are ways of getting over such difficulties temporarily, which at such a time as this can and ought in my view to be exercised if necessary. Let no eligible candidate thereby make that the excuse.

We want more men, and there are plenty of architects at home who can join up with us now and help us in getting on with some of the problems before us, so that when our fighting colleagues come home they may find that the Society has not been unmindful of their professional interests in their absence, but has done what it can to remove some of the disabilities which existed when they left and to rid the profession of some of those abuses which have existed for so long, and which only require earnest and combined effort to wipe out or amend.

I am conscious of many shortcomings in this brief address. I have just tried to put a few thoughts together for our consideration as a body of professional men banded together for the common object of the good of the community.

I cannot close without an expression of appreciation of the good services which the technical and lay Press have rendered to architecture and to the profession in the past. It is within their power to control very largely the destinies of any schemes of reform by influencing public opinion for or against them. A great responsibility therefore rests with the Press, which they have invariably recognised by the extremely fair and impartial manner in which they have handled questions of professional and public interest as affecting architecture and architects. The Society asks nothing better than that the searchlight of publicity should be brought to bear upon its proposals for reform, so that any defects may be made clear and some remedy sought for their amendment.

Constructive criticism is helpful, but even destructive criticism is preferable to apathy, and I should like to see architects take more personal interest in following up or initiating correspondence on matters of general interest affecting the profession for which the Press affords such valuable facilities.

Annual General Meeting.

The Annual General Meeting of the Society will be held at 28, Bedford Square on Thursday, January 11th, 1917, at 6 p.m.

Agenda:—

1. Minutes.
2. Nominations and Announcements.
3. Elections to Membership.
4. Council's and Auditors' Annual Report.

Report of The Council of The Society of Architects

For the Year ended October 31st, 1916.

To be presented to the Annual General Meeting on Thursday, January 11th.

THE Society has held forty-five meetings during the year, of which thirty-six were Council and Committee meetings and the remainder Ordinary and Extraordinary meetings, for the transaction of that portion of the Society's business in which the general body of members is concerned. The only paper read before the Society during the year was the one by Mr. H. Freyberg, F.S.I., on the "Conversion of Mansions and Maisonnettes," which was in hand at the time when the Council decided to restrict all meetings for the present to routine business.

ARTICLES OF ASSOCIATION. The Articles of Association have been revised and amended in certain directions. The chief alterations are some new disciplinary clauses and the reconstitution of the Council, giving London and country members definite proportionate representation thereon with more continuity of service, and ensuring an annual influx of new Councillors.

MEMBERSHIP. Thirteen candidates have been admitted to Membership, one to Graduateship, and two to the Register of Students. After allowing for deaths, resignations, lapses, removals and transfers to other classes, the total membership on October 31st was 1,171, made up as follows. Last year's figures are given for the purpose of comparison:—

	1916.	1915.
Members	963	1,003
Hon. Members	27	30
Retired Members	31	25
Graduates	9	178
Students	141	148
	1,171	1,213

Upwards of 25 per cent. of the members (in every class) are serving with H.M. Forces, and many "ineligible" members are engaged in other forms of national service.

The Council regret that the Society has sustained the loss by death of the following:—

Members. J. D. ANDERSON, Durban; A. E. ANTHONY, Brighton; C. R. H. ASHBY, Farnham; HARRY COOPER, London; B. J. EMERY,* Birmingham; T. C. HOPE, Ilkley; T. M. HOUGHTON, London; DAVID MACBEAN, Glasgow; CHAS. F. MITCHELL, London; KERSHAW PETERS,* Grimsby; W. DYMOCK PRATT, Nottingham; H. E. RIDER, London; A. W. SAVILLE, London; ALFRED E. SMITH, London; BENJAMIN TURNER, Barnsley; G. W. WATSON, Melbourne; ARTHUR WINCH,* Leeds.

Hon. Members. HARRY HEMS, Exeter; Sir JAMES D. LINTON, London.

Students. A. C. BAXTER,* Leeds; DAVID EVANS,* Welshpool; W. J. HILL,* Redruth.

REPRESENTATION. The Society was represented at the Mansion House Meeting on March 22nd on the question of the settlement of discharged sailors and soldiers on the land, and at the National Congress of the Housing and Town Planning Council in London in April, and on the subsequent deputation to the Prime Minister.

The Society continues to be represented on the executive of the following bodies:—

A. A. RED CROSS DETACHMENT, LONDON 43 V.A.D.; ARCHITECTS' BENEVOLENT SOCIETY; ARCHITECTS AND SURVEYORS' APPROVED SOCIETY; ARCHITECTS WAR COMMITTEE AND THE EXECUTIVE, SELECTION, AND EMPLOYMENT COMMITTEES; BEAUX ARTS COMMITTEE; BELGIAN TOWN PLANNING COMMITTEE; FIRST LONDON ENGINEER VOLUNTEERS; JOINT CONFERENCE ON CIVIC SURVEYS; NATIONAL HOUSING AND TOWN PLANNING COUNCIL; PROFESSIONAL CLASSES WAR RELIEF COUNCIL.

FINANCIAL POSITION. In the last Annual Report it was intimated that in addition to the economies effected during that year, certain others were in hand which would be reflected in the Accounts for this year. That forecast has been justified, as a reference to the Statement of Accounts attached hereto will show.

The principal economies are in general household expenses, postages, printing and stationery, and legal charges, in which there is a total reduction on last year of £209. A saving of £130 has been effected on the *Journal* in printing and postages. The examination expenses are also considerably less.

The maintenance charges and salary list remain practically normal, and the only increase on the debit side is in depreciation of investments. The net result for the year is a total reduction in expenditure of £450 and a surplus of £579, as against one of £326 last year.

On the credit side there is a decrease of £90 in subscriptions and of £90 in the revenue from the *Journal* and *Year Book*. The latter is more than compensated for by the reduction in printing, and these publications have only cost the Society £95, or £38 less than last year. There is a drop in examination fees, as was anticipated.

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* Killed in action.

A new source of revenue has been the letting of the Society's rooms for arbitration meetings.

Last year's Bank overdraft of £300 has been converted into a cash balance of £100, and the total surplus of assets over liabilities has been increased from £3,291 to £3,309.

The outstanding subscriptions are considerably in excess of last year, owing to concessions made to members, particularly to those serving with H.M. Forces, but as the whole of the surplus has been carried to reserve there is ample margin for these and other contingencies.

The Society's securities are free from any Bank or other charges. This means that in seven years the Society has paid out of revenue the whole of the expenses incurred in adapting and equipping its permanent premises, something like £3,300 without encroaching permanently on its securities.

The net financial result of the year is that by carefully nursing the Society's resources and a cutting down of expenses the Society has been able to provide against an inevitable heavy loss in revenue due to unpaid subscriptions and other causes, and to deal liberally with those of its members temporarily unable to keep up their subscriptions, to increase its surplus, write off its doubtful debts, and make a good reserve against possibly worse conditions during the coming year.

EXAMINATIONS.—The Graduateship and Membership examinations have been held in London, Liverpool, Cardiff, York, Dublin, and Toronto.

Nine candidates were admitted to the examinations, of whom only three satisfied the examiners.

Owing to the temporary decrease in the number of candidates, the Council decided for the present to hold the examinations annually instead of bi-annually as heretofore.

SERVICES TO OTHER BODIES. The use of the Society's premises and the services of the Society's staff have been again placed by the Council at the disposal of the Beaux Arts Committee and of the Professional Employment Committee of the Architects' War Committee.

The Society has no financial responsibility in connection with either of these bodies. The Beaux Arts Committee is continuing its important educational work at the Atelier during the war under somewhat modified conditions, and the Professional Employment Committee has been the means of giving a helping hand to a number of architects at the psychological moment when paid employment, and not charity, was needed to tide them over a difficult interval.

THE SOCIETY AND THE R.I.B.A. The Council has long felt that, if possible, opportunity ought to be made during the war for a conference with the R.I.B.A. on some points at issue hitherto between the parties, so that the friendly relations existing at present between them might become permanent and the need for raising similar contentious questions after the war become non-existent.

After due deliberation, and taking fully into account the delicacy of the task, the Council felt justified in taking the iniative towards further co-operation. A letter was therefore addressed to the Council of the R.I.B.A. suggesting a conference of representatives on Registration and other matters.

In doing so the Society pointed out that both bodies were to a large extent agreed upon the principle of Registration, but divided upon the method of carrying it into effect, the result being that when either party made a move a deadlock ensued. The Society also suggested that even on less contentious matters there was unnecessary overlapping and duplication of effort, and that there was room for co-operative action on economic lines in the direction of the Standardisation of Forms of Contract and other professional documents and in other ways.

The reply of the Council of the R.I.B.A. was to the effect that as the subjects suggested for consideration at the proposed conference were of a controversial character, the Council were precluded from discussing them during the war by pledges given to their members. The Council of the Society received this information with regret.

The Council of the Society will now have to consider whether under these circumstances it shall proceed independently in formulating its Registration programme, issuing its form of contract, and developing its other reform proposals in readiness for propaganda work after the war.

SCIENTIFIC RESEARCH. In response to an invitation from the Research Committee of the Board of Education to the Society to co-operate with them by indicating specific problems which in the opinion of the Society require investigation in the industries which the Society is most intimately concerned, the Council made a number of suggestions. On these being submitted to the Research Committee the Society was invited to elaborate its proposal for an investigation into the question of finding reliable but cheaper materials for use in building work. It was proposed by the Research Committee that the Society should discuss the matter with one of their members, and a Sub-Committee was formed and a number of meetings held, at which the Research Committee's representative was present.

The Sub-Committee is awaiting the report of a scientific expert as to the lines on which such an investigation might best be conducted. If his report is favourable in principle the Sub-Committee will further consider the possibilities of the Society undertaking to conduct research experiments in the direction of converting local products into suitable building materials, and to disburse any grants which the Research Committee may make for this purpose.

South African Branch. The Report and Statement of Accounts of the Society's Branch at Johannesburg is attached.* It will be seen that, like the parent Society, the Branch is in a sound position numerically and financially. The Branch has taken its share in supporting patriotic objects both in South Africa and at home, and during the year it sent a contribution of £10 10s. to the funds of the Professional Employment Committee of the Architects' War Committee.

The Society and War Service. The Society is represented on all the architectural War and Relief Committees and on the governing bodies of the Volunteer Training Corps and Red Cross Detachment associated with the profession.

The Society is assisting all these organisation by the personal services of its representatives, by providing one Committee with office accommodation and clerical assistance, and by contributing from time to time to the various funds. The Society gave £10 10s. to the A.A. Active Service Relief Fund in recognition of its practical work in providing comforts for architects serving with H.M. Forces.

A member in Australia, who prefers to remain unknown, made a substantial donation to a local Patriotic Fund in the name of the Society.

The Library. Some additions have been made to the Loan Library through the kindness of authors and publishers. The Society's collection of lantern slides has been augmented by a gift of some 2,000 valuable slides presented by Mr. G. A. T. Middleton.

The Society's Publications. With the completion of the present volume of the Transactions in October, the appearance of this publication as a monthly journal has ceased for the present, and in the meanwhile it will be issued quarterly in January, April, July and October.

This is a war time measure which it is hoped will prove acceptable to the members until more normal circumstances permit of a return to the old practice.

The Year Book is being issued as usual, minus some features which, while interesting and justifiable in the ordinary way, can properly be dispensed with at the present time.

Insurance. The Society's premises and the contents have been reinsured in a leading Fire Insurance Office against every contingency so far as it is possible to do so, and with the Government for other emergencies.

Generally. The aim of the Council during the year has been so to administer the Society's affairs and finances as to enable it to assist those members in temporary difficulties owing to the war to retain their membership, to carry on the necessary work of the Society efficiently, and to support those professional bodies formed for the relief of distress or for the purpose of national service in any form. By adopting this policy the Council has retained the confidence and support of the members of the Society, as shown by the practically undiminished membership, strengthened its financial position, provided for contingencies, and enabled the Society as a body to be of some service through the organisations it has supported, both to the profession and the community.

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* *This, together with the Branch President's portrait, will be published in the next issue.*

The Council desires to express its thanks to those members known and unknown who have rendered special services to the Society during the year by assisting with the examinations, acting as local secretaries, reviewing books, or in other ways contributing to the Society's work. To the general body of members, more particularly those resident in the country and in distant parts of the Empire, the Council is greatly indebted for their continued loyalty and support during a period in which they themselves are encountering many perplexities and difficulties. Without the personal co-operation of the members it would have been impossible for the Council to present so favourable a report as that which it is its pleasure to submit to the members at the conclusion of the Society's thirty-second year.

The Hotel Cameron, Swansea, has been erected on the site formerly occupied by "Ye Olde Cameron Arms Hotel," one of the oldest and most famous posting houses in South Wales. During the demolition of the ancient premises a quaint old well was discovered, situate under the original smoke-room and connected to the kitchen premises by a very well-constructed stone tunnel with an arched roof. Numerous coins bearing date 1800 were also found.

The principal façade is carried out in red Wilderness stone to the second-floor level, and in red pressed bricks with Bath stone dressings above that level.

The ground floor contains, in addition to the large banqueting hall, grill-room, lounge bar, luncheon bar, and billiard-room premises, besides ample cloak-room and servery facilities. The basement premises contain the kitchen offices.

The first floor contains residents' billiard-room, ladies' drawing-room, coffee-room, and a fine commercial room about 40 feet square. Some 100 bedrooms are provided in the various other floors. Electric passenger and service lifts have been installed, and an electric goods lift in the large stock-room building containing about sixteen stock-rooms, connected to the main hotel premises by a covered bridge.

The total cost of the premises, including the works carried out in the first instance, was about £45,000. The completion of the premises was carried out to designs prepared by and under the superintendence of Mr. CHARLES T. RUTHEN.

The Society of Architects' Revenue Account and Balance Sheet

REVENUE

	1915-16.						1914-15.					
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
To Expenses—												
General	78	14	8				81	9	11			
House	54	15	0				131	1	1			
Postages	49	12	3				73	8	5			
Printing and Stationery	80	3	9				136	17	5			
Rent, Rates, Taxes and Repairs	209	8	7				199	9	10			
Salaries	611	13	9				589	1	0			
Commission	69	2	7				91	9	0			
Legal	16	16	6	1170	7	1	76	13	0	1379	9	8
„ Publications —												
Printing and Postages, *Journal*	286	9	4				412	17	1			
„ „ *Year Book*	130	3	8	416	13	0	133	16	0	546	13	1
„ South African Branch				42	8	0				49	19	0
„ Social Functions—												
Bohemian Concert				—						22	8	6
„ Examinations				2	7	0				17	17	1
„ Bad Debts				1	2	10				92	15	6
„ Interest on Overdraft										11	17	6
„ Depreciation—												
On Leasehold Premises	89	0	0				89	0	0			
„ Furniture	65	10	0				65	10	0			
„ Library Books	24	0	9				23	14	9			
„ Investments	96	16	2	275	6	11	60	15	9	239	0	6
„ Surplus for the Year				579	19	1				326	15	1
				£2488	3	11				£2686	15	11

	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
To Donations—												
A. A. Active Service Relief Fund	10	10	0				26	5	0			
V. T. Corps							10	10	0			
Benevolent Society	10	10	0				15	5	0			
Sundry	5	5	0	26	5	0				52	0	0
„ Balance carried to Bad Debt Reserve				553	14	1				274	15	1
				£579	19	1				£326	15	1

BALANCE

				1915-16.						1914-15.					
				£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
To Sundry Creditors—															
Subscriptions and Entrance Fees paid in advance				52	10	0				50	18	6			
Sundry				95	6	7	147	16	7	112	12	7	163	11	1
„ Bank Overdraft							—			297	19	1			
Interest to date										4	1	5	302	0	6
„ Building Fund							109	11	6				109	11	6
„ Professional Defence Fund							325	0	0				315	0	0
„ Surplus—															
Balance as at 31st Oct., 1915				3291	7	3				3252	10	9			
Entrance Fees	29	8	0							48	16	6			
Less S.A. Branch	1	1	0							—					
	28	7	0							48	16	6			
Less Professional Defence Fund	10	0	0	18	7	0				10	0	0	38	16	6
							3309	14	3				3291	7	3
							£3892	2	4				£4181	10	4

We have audited the above Balance Sheet with the Books of the Society, and have obtained all the information and explanations
the Society's affairs according to the best of our information and

140, Leadenhall Street,
London, E.C.
December 11th, 1916.

for the Year ended 31st October, 1916.

ACCOUNT.

	1915-16.						1914-15.					
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
By Subscriptions—												
Members	2020	4	0				2105	5	0			
Graduates	6	6	0				6	6	0			
Students	74	0	6	2100	10	6	78	14	6	2190	5	6
„ **Publications**—												
Advts. and Sales, *Journal*	204	2	4				288	14	0			
„ „ *Year Book*	117	16	1	321	18	5	125	1	4	413	15	4
„ **Social Functions**—												
Bohemian Concert										22	8	6
„ **Examination Fees**				19	15	0				31	2	0
„ **Interest on Investments**				29	4	0				29	4	7
Hire of Rooms				16	16	0						
				£2488	3	11				£2686	15	11

				£	s.	d.				£	s.	d.
By Surplus for year carried down				579	19	1				326	15	1
				£579	19	1				£326	15	1

SHEET.

	1915-16.						1914-15.					
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d
By Leasehold Premises	2626	11	7				2715	11	7			
Depreciation	89	0	0	2537	11	7	89	0	0	2626	11	7
„ **Furniture**—												
Balance from last Account	291	15	8				336	10	6			
Additions during Year							20	15	2			
	291	15	8				357	5	8			
Depreciation	65	10	0	226	5	8	65	10	0	291	15	8
„ **Library**—												
Balance from last Account	80	9	11				94	0	1			
Additions during Year	2	17	0				10	4	7			
	83	6	11				104	4	8			
Depreciation	24	0	9	59	6	2	23	14	9	80	9	11
„ **Sundry Debtors**—												
Members	626	11	0				470	11	6			
Graduates	6	6	0				2	2	0			
Students	53	17	0				34	13	0			
Advertisers	65	0	0				115	0	2			
Sundry	6	7	9				12	13	6			
	758	1	9				635	0	2			
Reserve for Bad Debts	617	14	5	140	7	4	368	9	5	266	10	9
Investments (At market value Oct. 31st, 1916 –												
£568 18*s.* 8*d.* Met. Cons. Stock @ 58	329	19	7				406	15	9			
£500 4½% War Loan @ 96	480	0	0	809	19	7	500	0	0	906	15	9
„ **Cash at Bank**				109	0	7						
„ **Petty Cash**				9	11	5				9	6	8
				£3892	2	4				£4181	10	4

we have required. In our opinion such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the explanations given us and as shewn by the books of the Society.

ELLIS MARSLAND, *Hon Auditor.*
BOLTON, PITT & BREDEN, *Auditors.*

Proceedings.

A Special General Meeting of The Society of Architects was held at 28, Bedford Square, London, W.C., on Thursday, October 12th, 1916, at 6 p.m. The President, Mr. E. C. P. Monson, F.R.I.B.A., having taken the Chair, the minutes of the previous meeting, which had been printed in the *Journal*, were taken as read and were confirmed and signed.

The Secretary announced three nominations for Membership.

A ballot was then taken for the following candidates for Membership, and was declared to be unanimously in their favour:—

Bray, John Sanders, 60, Albany Road, Roath Park, Cardiff.
Davidson, Thomas Malcolm, Kroonstadt, O.F.S.
Munden, Patrick John, 5, Trinity Street, Dublin.
Smith, Irwin George, Oak Villa, Thorpe St. Andrew, Norwich.

The Scrutineers' Report on the ballot for the Election of Officers and Council, 1916-17, was then received, showing the following elections:—

President:

Sadgrove, Edwin J., F.R.I.B.A., London.

Senior Vice-President:

Scott, A. Alban H., M.R.SAN.INST., London.

Junior Vice President:

Partridge, Edward J., F.S.I., Richmond.

Past Presidents:

Hamilton, E. J. Brighton.
Lish, J. J., Newcastle-upon-Tyne.
Monson, E. C. P., F.R.I.B.A., F.S.I., London.
Pridmore, Albert E., F.S.I., ,,
Tubbs, Percy B., F.R.I.B.A., ,,

Honorary Secretary:

Sheffield, Noel D. London.

Honorary Treasurer:

Pearson, J. Herbert London.

Honorary Librarian:

Taylor, Alfred J. Bath.

Council:

LONDON.

Adams, Henry, M.INST.C.E., F.S.I., London.
Baines, George, F.R.I.B.A. ,,
Bare, R. Geo. ,,
Bowden, J. A. ,,
Ellis, Herbert O. ,,
Imrie, G. Blair ,,
Inglis, T. Stewart ,,
Jackson, Chas. E. ,,
Leslie, Col. F. S., R.E. (ret.) ,,
Moscrop-Young, F. C. ,,
Paine, George H. ,,
Tucker, B. R. ,,

COUNTRY.

Beaumont, P. M., A.M.INST.C.E. Maldon.
Cancellor, B. D. Winchester.
Cratney, Edward, F.R.I.B.A. Newcastle-upon-Tyne.
Davies, R. Cecil Chester.
Dickens-Lewis, Geo. E. Aberystwyth.
Gill, Harry Nottingham.

There being no observations on the Report, it was resolved that it be adopted and entered on the Minutes.

MR. E. J. HAMMOND (Gillingham) proposed a hearty vote of thanks to the outgoing President, Mr. E. C. P. Monson, who had filled the Chair for two years with remarkable success. Mr. Monson was a very busy man, and he held many other prominent positions, but he had given a great deal of time to the Society's affairs, and all that he had done had tended to its advancement.

MR. B. R. TUCKER (London) seconded the proposition, which on being put to the meeting was carried with acclamation.

MR. E. C. P. MONSON, F.R.I.B.A, thanked the members for their expression of appreciation and expressed regret that during his term of office the Society had been unable to accomplish much constructive work in co-operation with other bodies, as they had been met with the statement that contentious points could not be discussed in war time. He was of opinion that the present was eminently the time for the evolution of a constructive policy, inasmuch as the ordinary work of most professional bodies had been suspended owing to the war. He thought that as the tendency at the moment was for all classes to work in harmony for the common good, now was the opportunity for the discussion of contentious matters, so that the way might be cleared for a better understanding when these questions were once more raised after the war. He then invested the new President, Mr. Edwin J. Sadgrove, F.R.I.B.A., with the badge of office, and expressed the hope that during his term of office peace would be declared and the work of the Society taken up with renewed energy.

MR. EDWIN J. SADGROVE, F.R.I.B.A. (President) expressed his appreciation of the confidence of the members in electing him to the Society's highest honour, and said he would do his utmost to uphold the best traditions of the Chair. Many of the newly elected members of the Council were old colleagues of his and would, he knew, share the anxieties and responsibilities of the position with him. Votes of thanks were accorded to the retiring officers and members of the Council, the Scrutineers, and the Secretary and Staff.

The proceedings then terminated.

The Inaugural Meeting of the Thirty-third Session of The Society of Architects was held at 28, Bedford Square, on Thursday, November 16th, at 6 p.m. The President, Mr. E. J. Sadgrove, F.R.I.B.A., having taken the Chair, the minutes of the previous meeting were read and confirmed and signed.

The SECRETARY announced two nominations for Membership.

The ballot was taken for the following candidates for Membership, and was declared to be unanimously in their favour:—

Crickmay, William Ernest, 26, Hart Street, Bloomsbury.
Robinson, John J., 11, Fleet Street, Dublin.
Sparrow, Arthur John, Ingram House, Stockwell Road, S.W.

The President then read his inaugural Address.

Mr. Ellis Marsland, in proposing a vote of thanks to the President for his helpful and suggestive Address, observed that some of the proposals advanced were open to discussion at a more opportune time. His own opinion was that the question of Registration and other debatable topics ought to be left until after the war, when they would see more clearly to thresh out these great and important subjects.

Mr. A. H. Salisbury seconded the motion. It seemed to him unfortunate that the Council of the R.I.B.A. should have decided not to discuss Registration until after the war lest they should imperil the unity of the profession. He did not believe its consideration would divide architects. The policy of Registration had been steadily promoted by the Society, and its members should do all they could to educate the public as to its desirability, and to promote its recognition by statute. Architects who practised in country districts knew that until the architect was legally recognised his position would be a difficult and unsatisfactory one. The question of the education of young architects was an important one. In future years the architect would need to know much more on all manners of subjects than in the past, and would have to specialise. He would find it impossible to do justice to the artistic and technical sides of his profession. In their architectural examinations in the future there must be a standard of all-round general knowledge, efficiency, and competency up to a certain point, and then the student must be free to specialise according to the bent of his inclination. He was glad the President raised the question of the form of building contract, and if the Council of the Society had drafted a better form than the existing Institute one, let them by all means publish it. Then as to architects' fees. If they become specialists, one result, as had been the case in all other professions, would be that a uniform scale of fees must be abandoned. There must be a reconsideration of building by-laws after the war. Local authorities were needlessly reluctant to sanction the use of timber in domestic buildings. He feared that materials would never return to the former prices, and there must be a search for and a sanctioning by by-laws of new and more economical building materials.

Mr. Noel D. Sheffield, in supporting the vote of thanks for a very business-like address, remarked that they all knew that the scale of architects' fees was inadequate, but not all architects could be specialists and select their clients.

The percentage system must go, for it gave ill-informed people the impression that the architect and builder conspired together to raise the cost of building operations.

In responding to the vote of thanks, which was carried by acclamation, the President said that until his address was completed he had not read Mr. Ernest Newton's excellent address at the Institute, which he had not the opportunity of hearing. He had been struck by the many curious parallels in the independent lines of thought, the only real difference of outlook being as to the desirability of proceeding with Registration. It was evident from Mr. Newton's address that there were again in many minds suggestions of an amalgamation of professional societies. If, as the speaker apprehended, Mr. Newton was the mouthpiece of the Institute Council, and assuming, as they must do, that the Council was sincere in their expressions, he said emphatically that he was prepared, on behalf of the Society, to start off on a level of equality, and meet any nominees of the Institute to discuss the question of amalgamation. For his own part, he saw no insuperable difficulties in the way of reaching a proper understanding. Even if they were unable for the moment actually to amalgamate, they could at least co-operate. That would be one link in the desired chain, and it would not be his fault if the chain were not ultimately completed.

The proceedings then terminated.

An Ordinary Meeting of the Society of Architects was held at 28, Bedford Square on Thursday, December 14th at 6 p.m. The President, Mr. E. J. Sadgrove, F.R.I.B.A., having taken the Chair, the minutes of the previous meeting were read, confirmed, and signed.

The Secretary announced three nominations for membership.

The proceedings then terminated.

MAINLY ABOUT MEMBERS.

Wilfred James Hill, of Redruth, was educated at Truro College, and was afterwards articled to his father, Mr. Sampson Hill. He joined the Society as a student in 1913. Soon after the outbreak of war he received a Commission as 2nd Lieutenant in the Duke of Cornwall's Light Infantry, and was killed in action in France last September, in his 23rd. year.

Benjamin Turner, of Barnsley, joined the Society in 1887, and had for thirty years been one of its supporters. He was associated with the late Mr. John Wade in founding the firm of Wade and Turner in 1868, from which he retired in 1911. During this period the firm designed the first public elementary school in the Borough, the first public baths, the Miners' Association offices, the Queen's Hotel, and many other buildings of a domestic, commercial, and ecclesiastical character. Mr. Benjamin Turner died at his Barnsley residence last October, aged 75 years.

FRANK SIDNEY CHESTERTON, of London, was articled to Mr. Isaac Slade, and having subsequently supplemented his experience by further study, he commenced practice as an architect in London in 1898. He did a considerable amount of work of a domestic and business character on the Phillimore and other Kensington Estates and in other districts. Mr. Chesterton held a Commission as 2nd Lieutenant in the Royal Field Artillery, and in the early part of November left for France, where he died, on November 11th, of wounds received the same day. He joined the Society in 1907, and was 39 years years of age.

SIR JAMES DRUMGOLE LINTON, who died in London on October 5th, aged 75, had been an Honorary Member of the Society since 1892, and was at one time a frequent visitor at its social functions. He held the position of President of the Royal Institute of Painters in Water Colours from 1884 to 1899, and from 1909 until his death, and was associated in 1884 with the late Sir James Orrock, R.I., in carrying through the building of the Institute's galleries in Piccadilly. Sir James was knighted in 1885, and was an honorary member of many British and foreign societies connected with art.

DAVID EVANS, of Westpool, was articled to Messrs. Shayler and Ridge, of Oswestry, and joined the Society as a student in 1910. He entered the Army on the outbreak of war, and held a Commission as 2nd Lieutenant, Royal Anglesea R.E. Some time ago he proceeded to France, where he was killed in action on September 14th, 1916. He was 22 years of age.

EDWARD CRATNEY, of Wallsend-on-Tyne, was articled to Messrs. Hicks and Charlewood, F.R.I.B.A., and after serving as assistant to several other architects, commenced practice in 1907. During the last nine years the late Mr. Cratney designed and carried out many buildings of much originality in planning and design. These included libraries, model cottages, schools, residential buildings, council offices, and other works of a public, domestic, and ecclesiastical character. Mr. Cratney joined the Society in 1913, and was a Fellow of the R.I.B.A., a members of the Northern A.A., the Pen and Palette Club, and other professional bodies. The Council of the Society, recognising his qualities and attainments, invited him to become a candidate for a seat on that body in 1915, and on his election a note appeared in the technical press congratulating the Society on having secured his services. Unfortunately ill-health prevented him from actively taking up his duties, and eventually he had to enter a hospital and undergo an operation from the effects of which he died on December 1st at the age of 36. He showed his interest in the Society to the last, and shortly before he died, and while still in hospital, went to considerable trouble in recommending a candidate for membership. By his death not only the Society but the whole profession loses an architect who had already made his mark and who undoubtedly had before him a professional career of great promise.

THE

Journal

OF

The Society of Architects

FOUNDED 1884. INCORPORATED 1893.

Including Transactions and Architectural Notes.

No. 2. Vol. X. APRIL, 1917. [New Series.

The Society is not as a body responsible for the opinions expressed by individual authors and speakers.

British Prisoners of War Book Scheme.

The object of this scheme is to provide British prisoners of war interned in enemy or neutral countries with educational books. The Chairman of the Committee is Mr. Alfred T. Davies, C.B., of the Board of Education, and on his invitation the Society has agreed to co-operate by supplying certain books from the Library for the use of British prisoners of war who are desirous of pursuing their studies in architectural and allied subjects. The demand for books of an educational character greatly exceeds the supply, and members of the Society who have any technical books to spare should send a list to the Secretary, so that a selection may be made. A further development is a request received by the Committee that examining bodies in this country should accept records of study of British prisoners of war as part of a course of study or even for an examination. The Council of the Society has agreed to recognise in a liberal spirit any work done or examinations passed under such circumstances in cases where such prisoners on their return home may apply to sit for the Society's examinations. At a conference of examining bodies held at Whitehall on March 15th, on this question, the Society was represented by the Chairman of the Board of Examiners, Professor Henry Adams, M.Inst.C.E., who agreed to the general principle of the proposals on behalf of the Society.

The Presidential Address.

A Militant Body.

Something akin to the fighting spirit pervades the address delivered by Mr. Edwin J. Sadgrove, F.R.I.B.A.,* President of The Society of Architects, 1916-17, on assuming the Presidency of The Society of Architects; which, indeed, is a militant body, but always does its fighting in a gentlemanly way—a tradition that Mr. Sadgrove deftly upholds. For this reason (and for some other reasons) it is not easy to yield unreserved assent to the assumption that absorption of the Society in the Institute would be an unmixed blessing. Union is strength, but opposition certainly promotes alertness and agility, and very probably the Institute is all the healthier for occasional fencing bouts with its young and active rival. Mr. Sadgrove is no doubt sufficiently justified in the claim that "the recent changes and developments in the trend of architectural education and training in Great Britain can be traced very largely to the activity and foresight of the Society in season and out on this question of education and registration." Which is to say that no labour is in vain, although its effects be not obvious and immediate and are sometimes negative rather than positive.

Standardisation of Documents.

Rivalry seems, however, to be carried to excess in the matter of forms of building contract. There are, we believe, three several forms of contract in process of incubation—one by the Institute, another by the Master Builders, and a third by the Society. There are also rumours of new sub-contract forms; and presently these documents may be shed upon us thick as autumn leaves in Vallombrosa. We hope not. It is all very well for one organisation to say to another, "If you will not, we will," but for three bodies to proceed independently with the same work is not merely to waste effort, but to create confusion and to weaken the authority of all the forms. This is surely a matter in which they might easily and advantageously co-operate, and they might as well do it first as last; for it is easy to foresee that ultimately the three forms of contract will have to be fused into one. In the meantime, not one of them will win a tithe of the confidence that a joint production would command. There is yet time to treat these several forms as mere drafts, for combination into a joint form that would carry unchallenged authority, which is a matter of special importance when such documents come into the law courts.

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* See the *Journal* for January, 1917.

The Value of Criticism.

A handsome tribute to the Press, lay and technical, rounds off Mr. Sadgrove's address. He acknowledges the value of criticism, whether it be laudatory or adverse, and he realises that if criticism is to be of any real use it must be honest and outspoken. Merely "to say ditto to Mr. Burke" is less helpful to him and to his cause than on due occasion to indicate, faithfully and with all becoming courtesy, the faults or fallacies in his argument or the weaknesses of his scheme. That is the principle upon which, we are fain to believe, the Press of this country, taking it as a whole, may truly be said to act; and we may be permitted to add that it is the single aim of any criticism of the Government, of municipalities, of professional societies, or of buildings, that is permitted to appear in these columns. That it is not always accepted in the spirit in which it is tendered is as natural and inevitable as that it sometimes (but, we hope, as rarely as the exigencies of journalism will permit) may chance to be based on momentary misapprehension; but that it is invariably written in all good faith, and with the single aim of promoting the interests of the profession, the industry, and the art which it is our function and our honour to subserve, we need not formally declare. To those organisations which exist for the same object, we give all possible support, and we conceive that this is not least effectual when it happens to take the form (always as unpalatable to us as it can be to them) of a tonic medicine administered by a friendly hand. We are gratified to find that (by implication) the new President of the Society takes us in the right vein, and we have abundant reason to know that he is not alone in this appreciation. Nor do we oracularly assume our own immunity from criticism; on the contrary, we welcome it, and our columns are freely available for it, provided it is temperately and reasonably expressed.—*The Architects' and Builders' Journal.*

Building in War-Time.

Determination of pre-War Contracts.

MESSRS. DICK KERR & CO., LTD., in July, 1914, entered into a contract with the Metropolitan Water Board to construct two reservoirs near Staines at a cost of £673,811.

On February 21st, 1916, the Ministry of Munitions intervened, and the contractors stopped the work, and arranged to supply the Minister of Munitions with some of the plant and materials, and the sum of £42,000 had been received in respect of the sale of the plant. Clause 10 of the contract provided that all the plant, tools or materials on the site should continue to be the property of the Metropolitan Water Board until the completion of the contract. The Metropolitan Water Board, therefore, brought an action for a declaration that they were entitled to all the plant, tools and materials now on the site of the works and to all the proceeds from the sale of the plant and material on the on the site on February 21st, 1916. They claimed an injunction to restrain the defendants from removing from the works all plant, tools and materials.

The defence pleaded was that the Ministry of Munitions having required them forthwith to cease work on this contract, the further performance of it became impossible and illegal, and both parties were excused from carrying it out. Defendants denied that the plants, tools and materials were the property of the Metropolitan Water Board, and said that by the determination of the contract and in the events which had happened the plant, tools and materials had been re-vested in the defendants.

Mr. Justice Bray found that the object of the contract was not frustrated, and held that the plant on the site on February 21st was the property of the plaintiffs, but that as the Minister of Munitions had power to sell to the munition factories any plant which he removed, the plaintiffs were not entitled to the proceeds of so much as was sold or to damages for its conversion. But as the defendants claimed that they were entitled to deal with the plant as their own there must be an injunction restraining them from removing any further plant except so far as they might be ordered to do so by the Minister of Munitions. From this decision the defendants appealed upon the ground that by reason of the stoppage of the works by order of the Minister of Munitions their contract with the plaintiffs was terminated, and that the property in the plant had been re-vested in them.

The Master of the Rolls, in the course of his judgment, delivered on March 5th, said that he found that the contract could not be performed after the receipt of the notice of February 21st, 1916, by reason of the lawful act of the Minister of Munitions making it illegal and a criminal offence to continue work under the contract. On that ground alone he thought the appeal ought to succeed. The contract gave the Board a limited property in all the plant provided by the contractors. All that plant had been claimed by the Minister of Munitions, and the greater part of it had been removed and either sold or used elsewhere. There was no provision in the contract enabling the contractors to recover a penny from the Board towards the cost of restoring or replacing the necessary plant. It was impossible to consider that otherwise than as an event not in contemplation by either party at the time. He did not base his judgment on the physical or commercial impossibility of completing the contract at the end of the war and after the removal of the restraint imposed by the Minister of Munitions. The mere circumstance that the contractors might lose money would not suffice to terminate the contract.

He thought the decision of Mr. Justice Bray was wrong, and that the appeal should be allowed. That involved the discharge of the injunction as to the plant, and the substitution of a new declaration, and the Board would have to pay the costs of the action and of the appeal. The judgment would be without prejudice to any question as to the rights of either party to the proceeds of sale of plant, or as to any retention of moneys under the contract, which must be dealt with in a separate action.

The Lords Justices delivered judgment to the same effect.

THE NEW COURTS (EMERGENCY POWERS) BILL.

The Courts (Emergency Powers) Bill, to amend the Courts Emergency Acts and the Increase of Rent and Mortgage Interest (War Restrictions) Act, and to grant relief in connection with certain contracts has been printed.

Clause 1, which is to be construed as one with the Courts (Emergency Powers) Act, 1914, provides that

> Where, upon an application by any party to a contract for the construction of any building or work entered into before August 4th, 1914, the Court is satisfied that, owing to the prevention or resriction of, or the delay in, the supply or delivery of materials, or to the diversion or insufficiency of labour, occasioned by the present war, the contract cannot be enforced according to its terms without serious hardship, the Court may, after considering all the circumstances of the case and the position of all the parties to the contract and any offer which may have been made by any party for a variation of the contract, suspend or annul the contract on such conditions (if any) as the Court may think fit.

Clause 2 gives relief in the case of the fulfilment of a contract being interfered with by a requirement, regulation, or restriction of a Government department, other than the Admiralty or Army Council, in like manner as it applies in the case where such interference is due to a requirement, regulation, or restriction of the Admiralty or Army Council.

Clause 4 gives relief from disqualification for membership of the House of Commons through supplying the Government with certain property for war purposes or receiving compensation for requisitioned property.

First Prosecution under the Defence of the Realm Act.

At Bow Street Police Court, on March 13th, Samuel Haskins and Bros. (Limited), Maple and Co. (Limited), and Frank Lewis Griggs, were summoned by the Director of Public Prosecutions for having begun and carried on certain building and construction work at 1 and 2, Coventry Street, and 1, Wardour Street, W., without the licence of the Minister of Munitions; Joseph Mendlesohn (otherwise known as Joseph Maxson), for aiding and abetting in the commission of the said offence; and Herbert Haase (trading as Taperell and Haase), for procuring and abetting the same.

The prosecution alleged that some months' ago the premises to which the summonses referred became vacant, and Messrs. Haskins applied to the Minister of Munitions for a licence to carry out work at a cost of about £2,000, Mr. Maxson being described as the proprietor and Messrs. Taperell and Haase as the architects. Simultaneously another application in respect of the same premises, to carry out work at an estimated cost of £3,000, was received from Messrs. Maple and Co. Both these applications were refused. After a further application for a licence for work estimated to cost £500 had been refused, Messrs. Haskins intimated that the plans had been altered so as to reduce the cost of the work to £450. It was afterwards found, however, that various structural and decorative works were in progress, the total cost of which would considerably exceed the £500 limit. All the defendants on the advice of their counsel, pleaded "Guilty." The Magistrate fined Mr. Maxson £100; Messrs. Haskins and Messrs. Maple £75 each; Mr. Griggs £50; and Mr. Haase £25. Each defendant would also have to pay £5 5s. costs.

Proceedings.

The Thirty-second Annual General Meeting of The Society of Architects was held at 28, Bedford Square, London, W.C., on Thursday, January 11th, 1917, at 6 p.m. The President, Mr. EDWIN J. SADGROVE, F.R.I.B.A., having taken the Chair, the minutes of the last Annual General Meeting, which had been published in the *Journal*, were taken as read and were confirmed and signed.

One nomination for membership was announced.

The ballot was then taken for the following candidates for Membership, and was declared to be unanimously in their favour:—

ELLIS, GEORGE EDWARD, 1, Lithos Road, N.W.
ENGLISH, JOHN WILLIAM, Benwell House, Corbridge-on-Tyne.
BRESLAUER, BERNHARD, Homji Street, Bombay.
NORTHAM, JOHN LAMBARDINI, Guelph, Ontario.

The Council's Annual Report and the Auditor's Statement of Accounts for the year ended October 31st, 1916, as published in the January issue of the *Journal* were received and adopted.

The Society's Auditors, Messrs. Bolton, Pitt and Breden, of Leadenhall Street, E.C., were reappointed.

Votes of thanks were accorded to the Hon. Auditor, Hon. Officers, the Secretary, and the Staff. The proceedings then terminated.

An Ordinary Meeting of The Society of Architects was held at 28, Bedford Square, London, W.C., on Thursday, March 8th, 1917, at 6 p.m. The President, Mr. E. J. Sadgrove, F.R.I.B.A., having taken the Chair, the minutes of the previous meeting were read, confirmed and signed.

Four nominations for Membership announced.

The proceedings then terminated.

Royal Academy Exhibition, 1917.

PHOTOGRAPHS IN ARCHITECTURAL ROOM.

By a Special Regulation for the Summer Exhibition of 1917, photographs of architectural work, including Architectural Sculpture, will be admissible this year. The size of the photographs must be not less than 12 in. by 8 in.; they should be framed in slight woodframes, with or without mounts, which may be tinted. The buildings shown must have been erected within the last ten years. More than one photograph of the same building may be included in one frame,

British Fire Prevention Committee.

On the invitation of this Committee to the Society to nominate a representative to serve on a Sub-Committee formed to inquire into the effect of fire on concrete and reinforced concrete structures, the Council has appointed the President, Mr. E. J. Sadgrove, F.R.I.B.A., as their representative.

The Society and the War Loan Campaign.

The Society has contributed its quota to the War Loan, first by converting its holding of the old Loan into the new and adding to it a sum of £300, making £800 in all, and secondly, by interesting its members in the War Loan Campaign, and securing their active support. The Society has received a letter from the Lord Mayor thanking the many members who responded, and intimating that their assistance and advice has been of definite value to the Campaign and the organisation at the Mansion House, and that they have done much useful work in organising and speaking in various parts of the Metropolitan area. A letter has also been received from the Chairman of the National War Savings Committee, thanking the members who so generously assisted in the work of the campaign.

The President of the South African Branch.

MR. DUNCAN MCLEAN BURTON, the President of the South African Branch of The Society of Architects, was articled to Messrs. Smith and Tomlinson, F.R.I.V.A., Architects and Surveyors, Saltburn. He afterwards spent five years in the office of Mr. Edward A. Whipham, A.R.I.B.A., Stockton-on-Tees, leaving in 1899 to assist Mr. John Robinson, Town Surveyor, Wombwell, Barnsley. Mr. Burton went to South Africa in 1903, and after spending some time in Cape Colony on survey work, proceeded to Johannesburg, where he has been practising as an architect for the past ten years. He is architect to several important companies, and his work on hand includes new banking premises at Port St. Louis, Mauritius, for the Colonial Banking and Trust Co., Ltd. He is architect for the new factory, workshops, and studios now being erected for the African Film Productions, Limited, the cost of which, when completed, will amount to £30,000. This is the first work of its kind to be carried out in South Africa, and possibly in the Southern Hemisphere. Mr. Burton is a Fellow of the Royal Colonial Institute; a member of the Royal Sanitary Institute; a member of the Council of the Association of Transvaal Architects and of several other Associations and Institutions.

MR. D. MCLEAN BURTON, PRESIDENT OF THE SOUTH AFRICAN BRANCH OF THE SOCIETY OF ARCHITECTS, 1916-17.

South African Branch of The Society of Architects.

In the absence of the President, Mr. S. C. Dowsett, on active service in East Africa, the Acting President, Mr. D. Ivor Lewis, presented the Tenth Annual Report of the Branch at a meeting held in Johannesburg, on October 10th, 1916. The total membership is 55, a decrease of 4. The death of Mr. J. D. Anderson, of Durban, was a great loss to the profession, the Branch, and the Society. Some 30 per cent. of the members are on active service, including the retiring President. The financial position is sound, there being a credit balance in the bank of £130.

Owing to the War the Architectural Classes at the S.A. School of Mining and Technology were poorly attended, and the Branch prizes were not allocated in full, but a book prize of the value of £4 10s. was awarded to Mr. W. B. T. Newham, who attained a First Class Pass, with distinction, and first place in the examination. The Branch has renewed its offer of prizes to the value of £9 10s. for the forthcoming Session.

The Union of South Africa Registration Bill is not being pressed by the Branch at present, but a more opportune moment the Branch will resume its active propaganda in conjunction with the other architectural bodies.

The Report was adopted, as was the following financial statement to September 30th, 1916:—

RECEIPTS.

	£	s.	d.
To Balance (Oct. 1st, 1915)...	106	15	9
,, Moiety of Members' Fees from Parent Society ...	42	4	10
	£149	0	7

PAYMENTS.

	£	s.	d.
By Rent of Board Room ...	5	5	0
,, Prizes	4	10	0
,, Legal Expenses	5	13	11
,, Postages and Sundries ...	3	1	4
,, Balance at National Bank of S.A.	130	10	4
	£149	0	7

Examined and found correct.

D. IVOR LEWIS, Acting President.
D. M. BURTON, Honorary Treasurer.
E. H. WAUGH.

Clause 4 of the Branch Rules was altered to provide for three vice-presidents instead of one, subject to approval by the Home Council, which has since been given.

The following Officers were elected for 1917:—

President, D. M. Burton; Vice-Presidents, W. J. McWilliams, H. G. Vealo. Honorary Secretary, M. J. Harris; Honorary Treasurer, D. H. Sinclair; Council, S. C. Dowsett, E. H. Waugh, D. Ivor Lewis, J. F. Beardwood. Auditor, J. S. Donaldson.

The meeting approved, subject to confirmation by the Home Council, which has since been obtained, the following Resolutions agreed by the Branch representatives at a Joint Conference of Architectural bodies held at Johannesburg on June 28th, 1916.

> "That this meeting expresses its confidence in the Registration Committee recently appointed by the Association of Transvaal Architects, and considers that the Registration Committee appointed by the various centres constitutes the proper body to act on behalf of the united profession in South Africa."
>
> "That this meeting affirms its sympathy with the proposal to preserve the identity of the existing South African Architectural Societies for local purposes, but to affiliate the said Societies with a new organisation, namely, the South African Institute of Architects, to deal with broader questions."

The meeting closed with votes of thanks to the retiring Officials and Members of Council.

The Society's Staff and War Service.

At the outbreak of war, the male members of the Society's clerical staff offered themselves for Military service. The junior, J. Jones, was accepted, joined the Royal West Kent Regiment, and was wounded in the head at Hooge. He has been since promoted to Corporal and has returned to duty.

The Assistant Secretary, Mr. W. E. Wanmer was rejected as unfit, and joined the V.T.C. He was subsequently re-examined and passed for general service, and has joined the 28th County of London Regiment (Artists' Rifles).

The Secretary being over the age limit, and therefore ineligible for the Army, took up Red Cross work, qualifying in three subjects. He joined the A.A., V.A.D., London 43, and worked also with the London Ambulance Column, both as stretcher-bearer and ambulance and hospital orderly. He resigned to take a commission in the Volunteer Force (County of London).

Vacancy on the Council.

To fill the vacancy on the Council caused by the death of the late Mr. Edward Cratney, of Newcastle-on-Tyne, the Council have co-opted Mr. A. G. Ware, of Bournemouth, for the unexpired period of the late member's term of office.

Architects and National Service.

DEPUTATION TO MR. NEVILLE CHAMBERLAIN.

A DEPUTATION representative of the whole profession waited upon Mr. Neville Chamberlain, Director-General of National Service, on February 21st, at St. Ermin's Hotel, Westminster, with a view of securing a definite place for architects in the scheme of National Service.

The architects serving on the deputation included representatives of the R.I.B.A. and its Allied Societies, The Society of Architects, the Architectural Association, unattached architects and of the Architects War Committee.

The Society was invited to appoint two representatives and to nominate two unattached architects. Those officially representing the Society were the President, Mr. E. J. Sadgrove, F.R.I.B.A., and the Senior Vice-President, Mr. A. Alban H. Scott. Other members on the deputation were Mr. Percy B. Tubbs, F.R.I.B.A., Past-President; Mr. C. Cheverton, President of the Devon and Exeter Society; and Mr. Harry Gill, President of the Nottingham and Derby Society. The unattached architects nominated by the Society were Mr. W. H. Cowlishaw and Mr. F. J. Wills.

The deputation was introduced by Mr. Ernest Newton, A.R.A., who made it clear that the profession of architecture is essentially practical, and pointed out how their knowledge and experience might be utilised to the advantage of the State. Mr. Reginald Blomfield followed, urging that the prevailing idea that architects were merely artists was wrong. Mr. J. B. Gass, of Manchester, speaking on behalf of the Allied Societies, referred to the presence of the delegates of The Society of Architects and of other bodies as showing the representative nature of the deputation, which he described as the most important one ever known in British architecture. He put forward the following suggestions:—

That an Architectural Advisory Committee, with representatives in the Allied Societies' districts, might be appointed.

The Architects' War Committee with the Allied Societies will undertake to further extend their register, classify and recommend for employment experienced architects for control of national building operations and buildings; these to be appointed to positions as required through the Advisory Committee and as far as possible in their home districts.

When advantage would accrue to the State special arrangements might be made with practising architects to undertake part-time duties in the districts in which they practise.

The special training and experience of architects enable them to undertake all duties in connection with all classes of buildings and the various works connected therewith, as well as inspection work dependent on the carrying out of drawings and specifications.

When demobilisation occurs this organisation will be available to assist architects on active service in returning to professional work in civil life.

Sir Aston Webb, K.C.V.O., C.B., R.A., referred to the statement made in Parliament that engineers were wanted rather than architects. That was a point they all felt very much, because architects were more fitted for much work which had hitherto been entrusted to engineers, and it was their desire to place their services and the organisation of their Societies at the Directors, disposal.

Mr. Neville Chamberlain, in his reply, expressed his sympathy with the representations made, and thought that one of the most practical of the suggestions made was that put forward by Mr. Gass for the setting up of an Advisory Committee, which would keep in touch with him and suggest from time to time ways in which the services of architects could be utilised.

He was endeavouring to make special provision for men of the professional clesses by having them classified, under the direction of a qualified officer, and allocated to the Divisional Office instead of to the Local Employment Exchange. Special measures would then be taken to utilize their services in the particular avocations for which they were best fitted.

On the morning of the day following the depuation, at a very representative gathering of the Architects' War Committee, held at Conduit Street, an Architects' Advisory Council was formed, on which The Society of Architects is represented, and in the afternoon a Joint Committee of the Professional Employment Committee of the A.W.C. and of the Council of the Architectural Association was held at 28, Bedford Square, to consider and report upon the position of architects after the war. This is practically a Demobilisation Committee, which will work in co-operation with the Advisory Council on problems common to both bodies. The following members of The Society of Architects are on this Joint Committee: Mr. Percy B. Tubbs, F.R.I.B.A. who has been elected a vice-chairman ; Mr. E. C .P. Monson, F.R.I.B.A.; Mr. Cheverton of Devonport; Mr. Gill, of Nottingham; and Mr. C. McArthur, Butler, who has been appointed joint honorary secretary with Mr. F. R. Yerbury. The Committee, which has the snpport of every Architectural Society in Great Britain, is called The Architects' Reorganisation Committee.

How to Enrol.

The Advisory Council invites architects in a position to sign the National Service Form to send it *in duplicate* to the nearest Architectural Society allied to the Royal Institute of British Architects, or to the latter in the case of practioners in London and the Home Districts, so that the whole of these Forms may be collected and sent to the National Service Headquarters in the form of a united offer from the whole profession. Members may send their Forms to the Society if they prefer to do so.

It is hoped that a prompt and extensive response may result from this appeal.

Housing After the War.

The National Congress, held at Caxton Hall last April, under the auspices of the National Housing and Town Planning Council, in which the Society took part, was followed by a deputation to the President of the Local Government Board in September, urging that a large sum should be made available on special terms to Local Authorities and other agencies for preparing housing schemes to be carried out after the war. The President, Mr. E. C. P. Monson, F.R.I.B.A., was one of the speakers, and dealt with the subject from the professional standpoint.

This was followed by a meeting of representatives of interested bodies, including the Society, held at the Law Society's premises in Chancery Lane, to discuss a proposal for obtaining the repeal of Part I. of the Finance (1909-10) Act, 1910, which had had a baneful effect upon the provision of working-class dwellings.

At this meeting a Resolution was passed urging the Government to remove the restrictions and to encourage private enterprise and co-operative effort in providing healthy dwellings for the people.

Subsequently it was agreed to send a deputation on the subject to Lord Rhondda, and the Council of the Society nominated the President, Mr. E. J. Sadgrove, F.R.I.B.A., to represent them thereon.

The Council have also appointed the President, and Mr. A. J. Murgatroyd, a Past Vice-President, on the Executive Committee charged with the arrangement for convening a conference in Manchester and other centres on the housing question, and have sent representatives to a series of informal conferences on the subject convened by the National Housing and Town Planning Council. Generally speaking, the Society is keeping closely in touch with this important problem, and actively co-operating in the various efforts which are being made to deal with it.

Landlord and Tenant.

A case of considerable interest and importance to architects and surveyors was decided at the Clerkenwell County Court on November 9th, 1916, by His Honour Judge Howland Roberts, when the trustees of the Royal Oak Benefit Society sought to recover against Mr. Edwin James Sadgrove the sum of £17 2s. 6d., which included £5 5s. for surveyors' fees for plans and particulars of state of repair.

After considerable argument by Counsel on each side, the learned judge, on the authority of *re* McGarel, 1897, 1 Ch. 400, held that the proper Solicitor's costs for preparing lease and counterpart as per scale fixed by the Solicitor's Remuneration Act were £7 10s., and following, *re* Negus, 1895, 1 Ch. 73 decided that the plaintiffs must themselves bear the cost of preparing the counterpart amounting to 15/- out of the £7 10s.

The defendant and Mr. A. E. Pridmore, F.S.I., and Mr. E. C. P. Monson, F.R.I.B.A., F.S.I., Past Presidents of The Society of Architects, having given evidence, His Honour decided against the plaintiffs in respect of the surveyor's charges for particulars of state of repair, which he disallowed, holding that they were costs of preparing settling and completing lease and counterpart, and that even if that were not so the work done would have come within the scope of negotiations for the lease. As to the plans, His Honour held that the costs of the plan on the counterpart were part of the costs of the counterpart and accordingly fell upon the lessors and, further, that as the plan on the lease was according to the evidence, a tracing of a former plan no special charge could be made in respect of that plan. His Honour accordingly disallowed as against the lessee any charge for plans.

The result was that the learned Judge held that the total amount payable by the lessee was £8 5s., made up of £6 15s., being £7 10s., the scale fee for lease and counterpart less 15s. the costs of the counterpart, and £1 10s. the stamp on the lease. As the defendant had paid more than this amount into Court, His Honour entered judgment for the defendant with costs from the time of the payment in, the plaintiff recovering the £8 5s. with costs on that amount until the time of payment in. The judge declined to certify for higher scale costs than the scale applicable.

Regulating the Practice of Architecture as a Profession.

SUGGESTIONS FOR AN ADDITIONAL SECTION TO ALL FUTURE STATE LAWS OR TO ALL EXISTING LAWS FOR THE REGULATION OF THE PROFESSION OF ARCHITECTURE.*

I have been requested by so many Chapters of the Institute and members of the State Boards for Regulating the Practice of Architecture as a Profession, for assistance in formulating new laws or amending existing ones, since the publications of my articles in the JOURNAL for October, November and December, that I deem it important to be more explicit in recommendations how to provide for what has for several years impressed me as the most important provision to be embodied in such enactments—that is, for not only eliminating from the profession, but for punishing those who may be found to be guilty of *dishonest practices* in the pursuit of their profession. Nearly all of the State laws give power to boards of examiners to revoke licences for "dishonest practices"—without defining what they may consist of—and the Appellate Court of Illinois, without ruling against such penalties being inflicted, has held that the words are plural and that the penalty cannot be inflicted for *one* dishonest practice. That makes it necessary to amend such acts by definitions declaring that one dishonest practice is sufficient for revocation.

It is also important that as many as possible of dishonest practices known to be prevalent should be defined in the laws. To that end I propose that an additional section be added as an amendment to all of such laws. No existing section should be amended, for by so doing Court decisions sustaining the constitutionality of such laws might become thereby nugatory. I have therefore drawn up the following explanatory section, to which should be given such a heading as is customary to add to amendatory Acts in the several states, and which should always be submitted to some competent lawyer before presentation to any state legislature or general assembly.

The following is suggested as a sample:—

A BILL for an Act to amend an act to provide for Licensing (or Registering) Architects and Regulating the Practice of Architecture as a profession, as adopted and in force —— and amended by adding a section to be known as Section ——, as follows:

Wherever the words "dishonest practice" or "dishonest practices" occur in this Act the same is hereby defined to refer to one or more of such practices; and the following are hereby defined as among dishonest practices, for which the license of an architect may be revoked upon trial or investigation by the State Board, and are hereby declared to be unlawful, for the commission of which the holder of such license (or certificate of registration) may be punished by fine or imprisonment or both after due trial in any court of competent jurisdiction, which fine shall be not less than two hundred (200) dollars, nor more than five hundred (500) dollars, or imprisonment, upon failure to pay the fine of not less than two nor more than six months, in the discretion of the Court.

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* *Peter B. Wight in the Journal of the American Institute of Architects.*

1. To be guilty of fraud or misrepresentation in obtaining a license (or certificate of registration).
2. To accept any commission or substantial service or favour from any contractor or anyone connected with the building trades, or from anyone furnishing materials in a building designed or supervised by the architect of the building in which the same are used.
3. To injure intentionally the fair reputation, prospects or business of another architect.
4. To attempt to supplant a fellow architect after definite steps have been taken toward his employment.
5. To conspire or attempt to conspire with any other person to violate the building or sanitary laws of any village, city, town, county or state in which building is regulated by law.

Note.—Since this article was received, the Legislative Committee of the Architects of Indiana has formulated and had introduced in the General Assembly of that state a bill for the "Licensing of Architects and Regulating the Practice of Architecture," modelled after the Illinois law. It has added a section, the wording of which is almost exactly copied from that recommended by Mr. Wight as above and suggested in his article in December. This section defines "Dishonest Practices" as referring to one or more of such practices and specificlly describes three as follows:—

(1) "To be guilty of fraud or misrepresentation in obtaining a license to practise architecture."

(2) Exactly as recommended in the *Journal* and marked (2); and

(3) Exactly as given and numbered (5) in the *Journal*.

The Committee of Architects in charge of the bill says: "It was thought by our legal counsel that the suggestion that it would be considered a misdemeanour for an architect to injure the reputation of another should be taken care of in an individual suit for damages rather than in the statute; also that a clause referring to an architect supplanting another who had taken steps for procuring a commission or executing it, is one which involves the ethics of the profession and could not be a specific, forceful claim in the statute."

The whole question of adding a new section of similar import to the Illinois law will be considered at a regular meeting of the Illinois Society of Architects to be held very soon, at which legal counsel will be consulted.

Fuel Economy.

Mr. A. H. Barker, of the Department of Heating and Ventilating Engineering, University College, London, is engaged on behalf of the Committee of Fuel Economy of the British Association in making investigations on the consumption of fuel for domestic heating and other purposes with a view to economising the national resources. One branch of this investigation has as its object to determine forms of building construction which will reduce the loss of heat through the walls of a dwelling house. In this connection he is endeavouring to compare the heat retaining effect of different kinds of plaster applied to the inner surfaces of walls.

There must be many inexpensive compositions known to architects which will probably produce a great effect in this direction and any Members who are interested in this most important national problem, and who are in a position to submit suitable samples should communicate with Mr. Barker, who is making tests of the exact effect of such plaster and would be prepared to submit any samples sent to him to that test if it appeared to offer any prospect of success.

Registration of Business Names Act, 1916.

The attention of members is called to this Act, some of the provisions of which would appear to apply to practising architects:—

For instance, every person or firm carrying on business for profit in the United Kingdom under a business name not consisting of his true surname or the true surnames of all partners, without any additions other than Christian names or initials, must register under the Act.

After March 22nd, 1917, all business letters, etc., of persons or firms required to be registered must have mentioned in legible characters the true surname and initials of all persons or partners in the firm.

Any change in the name of a person or firm must be registered within fourteen days, and also if any person or a partner in a registered firm changes his residence.

There is a penalty of £5 a day for non-compliance with the Act, and there are other heavy penalties as to defaulters, recovery of debts, wrong statements, etc.

Registration forms may be obtained (gratis) at any Post Office. The registration fee is 5s., stamp on form.

All communications should be addressed to "The Registrar of Business Names," 39, Russell Square, London, W.C.

MAINLY ABOUT MEMBERS.

GEORGE EATON SHORE, of Crewe, who died on November 6th last, was the Borough Surveyor of that town. He joined the Society in 1892, and belonged also to the leading Institutions connected with civil, mechanical, and sanitary engineering. A somewhat tragic coincidence in connection with Mr. Shore's death was that his son, Lieut. J. C. Shore, who was summoned from France to his father's bedside, was, on returning to the fighting line, killed in the same hour that his father passed away.

ARTHUR THOMAS GUNNELL WOODS, of Brentwood, was one of the first members of the Society, having been elected in 1885. He took a personal interest in the Society's proceedings and encouraged his assistants to do so thereby recruiting the Society through the examinations. The late member passed away on February 5th, in his fifty-seventh year, after a short illness following a severe operation.

Extensive improvements are in progress at Vicarstown Catholic Church for the Rev. J. Delany, P.P. The work is being carried out in accordance with the plans, etc., prepared by Mr. ANTHONY SCOTT, Dublin.

The parish church of Bunninadden, Co. Sligo, has been re-opened after alterations. The marble altar steps, communion rail, and kneeler are from designs prepared by Mr. R. M. BUTLER, architect, Dublin.

Mr. H. P. TUFNAIL, of Bognor, has been promoted to the rank of officer commanding a convoy of the Red Cross Society in France, which he joined as a driver some eighteen months ago.

The late Mr. BENJAMIN TURNER, of Barnsley, left £10,000 to relatives, friends and former servants, £5,000 upon trust for the benefit of maiden ladies in reduced circumstances, and £1,000 to be divided amongst local charitable institutions.

The high altar at Ashford Church, County Dublin, is nearing completion. It is executed in Sicilian marble, having carved reredos with mosaic panels and carved group under altar table with Doric supporting shafts. Mr. P. L. MUNDEN, of Dublin, is the architect.

Mr. E. WHITWELL, surveyor to the Abersychan Urban District Council, has received an important appointment under Government. There were 300 competitors for the position, and the Council have offered their congratulations to Mr. Whitwell upon his success.

St. Finn Barr's Collegiate Chapel attached to the Honan Hostel, Cork, has been erected in the grounds of the University College, and was designed by Mr. JAMES F. MCMULLEN, of Cork, Architect and Knight Commander of St. Gregory. The nave is 72 ft. in length and 29 ft. in width, and the chancel 26 ft. in length and 18 ft. in width. It is built of the native limestone of the locality.

New offices for the Prudential Assurance Company have been erected at Taunton at the junction of High Street and Corporation Street. The architect was M. J. H. PITT, F.S.I., the Company's district office surveyor. The building was recently opened by the Mayor, when the architect was congratulated on having produced a building worthy of its prominent situation and an ornament to the town.

A garden village institute is in course of erection in Oakdale Garden Village, Monmouthshire. The building consists of library and billiard-room, with a concert hall and committee rooms over same, giving accommodation for 250. A cinema hall and swimming baths are provided as a future extension. The main façade is of Forest of Dean stone, with Portland stone dressings, and the roof is covered with old tiles. Mr. A. F. WEBB, of Blackwood, Mon., is the architect.

Mr. CHARLES TAMLIN RUTHEN, of Swansea, has accepted an appointment as Inspector of Government Buildings. The appointment is unpaid, and will not mean that Mr. Ruthen is leaving Swansea. For some time past there has been considerable discussion in Parliament and elsewhere about the extent and the maner in which the Government has commandeered buildings for new Departments. Lord Curzon, in the House of Lords, announced that two new Inspectors were to be appointed to inquire into the utilisation of Government buildings and to report to the Committee that has now been appointed for the purpose.

Several interesting discoveries have been made at Filey, leaving little doubt that there has been a Roman settlement there. What is thought to be a Roman pavement was found near the church. About two feet below the surface was found a square yard of tiles, and also parts of the foundations and walls of a building, which is thought to be the site of the old Manor. Mr. R. M. ROBSON, architect, of Filey, is of opinion that the tiles are not Roman, but work of the sixteenth and seventeenth century, and probably at one time formed part of the old church. Some years ago, during excavations in another part of Filey, Mr. Robson found part of a Roman pavement.

A new set of offices has been built at Karachi for Messrs. Mackinnon, Mackenzie and Co. The architect is Mr. J. H. SOMAKE, who designed the general building and also all details and fittings. The building before being handed over to Messrs. Mackinnon, Mackenzie and Co. was offered by the architects to Government as a temporary war hospital. The offer was accepted and is being used as such after some minor alterations. The building with all out-offices and appurtenances has cost something under Rs. 3 lakhs.

The style of architecture adopted may be said to be a severe type of modern Renaissance, and it is planned in the form of an E. The central feature is 70 feet in height, and the two wings about 50 feet. In the centre is a main entrance piazza with doorway in Grecian Doric style built in red Jodhpur sandstone, and from the main hall ascends a 10-foot wide marble staircase. On the ground floor are a brokers' room, a ship captains' hall with dressing room and lavatory, a public waiting room and enquiry office, and a spacious record room. Upstairs, in the main hall, are located the various departments and general offices, while the whole of the west wing is devoted to the manager's office and the staff's tiffin and dressing rooms. In the yard there are godowns for heavy and light packages, stables and motor room, with peons' quarters and kitchen above.

London Volunteer Regiment.

At one of the monthly meetings of the officers of an East End Battalion it was observed that the guest of the evening and three of the officers were members of the Society. The Acting-C.O. Major Freyberg (M.) was presiding, supported by the Mayor of Stepney, Ald. Chidgey (M.), the Brigade Signalling Officer Captain Archer (M.), and Lieutenant C. McArthur Butler (M). The Commandant, Lieut.-Col. G. E. Holman, T.D., is an architect, and the Adjutant, Captain Kilburne and Lieut. P. F. Gleed are surveyors, as are a number of other officers. The Battalion may be said to be largely officered by architects and surveyors, which perhaps accounts for the successful work done by the Regiment on the London Defences.

At the moment there are one or two vacancies for officers, particularly any who are qualified for special duties, such as taking charge of the Cyclists. Any member of the Society who may like to enquire further into the matter should communicate with the Secretary without delay.

The Architectural Association Red Cross Detachment.

We are glad to support Quartermaster Yerbury's appeal for more members. The value of the voluntary work which the Detachment is doing cannot be over-estimated, and it cannot cope with all the demands made upon it unless its numbers are increased. The appeal is directed particularly to members of the architectural profession, and if there are any who are in sympathy with work but who are prevented from joining by age or distance from town, they can give other practical support by sending donations, either for the general funds or towards the Ambulance which is required for use in connection with the Detachment work.

Communications should be sent to the Quartermaster, at 37, Great Smith Street, Westminster, S.W.

Review.

Port Sunlight: A Record of its Artistic and Pictorial Aspect. By T. Raffles Davison, Hon. A.R.I.B.A. Price 5s. net. (B. T. Batsford, Ltd.).

To most of us it is well known that Port Sunlight is one of the best examples of a modern garden estate, developed under a single controlling influence and with a single and simple aim to give the workpeople in a large establishment healthy and artistic homes, so arranged and equipped as to develop a communal life, a feeling of *esprit de corps* and unity, and a sense of comfortable well-being and content. How this has been done is well illustrated in Mr. Davison's little book, full as it is of his inimitable sketches and collotype reproductions of first-rate sketches. If it fails anywhere it is in the over adulatory tone of the descriptive matter, which sometimes goes so far as almost to defeat its own ends, leading a student to suspect that there is something which it is attempted to cover up. This is not the case: the defect is merely due to excessive zeal, and the book is worthy of study.

Ordinary Meeting.

An Ordinary Meeting of the Society will be held at 28, Bedford Square on Thursday, April 12th, 1917, at 6 p.m. Agenda:—

1. Minutes.
2. Nominations and Announcements.
3. Ballot for Candidates for Membership.
4. Other competent business.

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The Society is not as a body responsible for the opinions expressed by individual authors and speakers.

The New York State Law for the Registration of Architects.

A LAW restricting the practice of any profession or regulating business should be subject to careful analysis, as it involves the fundamental right of a person to earn a living. The framers of the architect's registration law in the State of New York had clearly in mind the evil of unjust restrictions, and believed the only justification for such a law to be the raising of the standards of the profession and the protection of the public from the incompetent.

The law does not deprive any person of the right to prepare plans for a building or structure, nor does it prevent any department having jurisdiction over the erection of buildings from considering and approving plans for the erection of buildings which have been prepared or submitted by an applicant not having the title of architect. It leaves the question as to who shall be employed to prepare plans and supervise work entirely to the person desiring such service; but it does prohibit the use of the title of architect or registered architect except where such right has been conferred by law.

Particular attention is called to this feature of the law, since there is among architects a feeling that no law enacted in their behalf should in any way seem to trespass upon the right of a structural engineer or builder; but this places upon the engineer and builder a responsibility in the conduct of their own occupations.

If the architect recognises the competent structural engineer and builder, the public should be protected from the incompetent in such technical occupations by minimum standards fixed by the competent and having the force of law, otherwise those who believe that the law does not fully meet the situation are justified in their criticism.

There also arises the question of a citizen's right to insist upon recognition of æsthetic values, certainly as far as relates to its influence upon commercial values of environment. This principle is already recognised in governmental building by the establishing of Federal and Municipal Art Commissions, whose approval of the architectural merit of the proposed building is a condition precedent to its erection. The application of this principle should be extended carefully and justly, and is a factor that must be recognised by the framers of future laws requiring qualifications for those who design structures of any kind that are to be more or less permanent in their character.

The act to amend the general business law in relation to the practice of architecture in the State of New York became a law on April 28th, 1915.

Let us first consider the provisions of the law for those who were entitled to registration under the waiver—that is, those who were actually engaged in the practice of architecture prior to the passage of the Act. This involves both the architect and the draughtsman.

The law requires that every person who was not styled or known as an architect prior to the passage of the Act must obtain a certificate of registration to entitle him to use the title "architect." This provision applied to all draftsmen who had practised under the title of architect when the law went into effect. The law, however, permitted the Board of Examiners to consider an application for registration from such a draftsman provided he had been exclusively engaged in the practice of architecture for more than two years prior to the passage of the Act, and that he could present such evidence of good character and competency as would justify the Board of Regents in issuing to him a certificate granting him the right to use the title of architect or registered architect; but the law required such a draftsman to make application for registration prior to April 28th, 1916.

The law also provides for registration under the waiver of those who were in practice under the title of architect prior to the passage of the Act, provided that the applicant could submit satisfactory evidence as to character, competency and qualifications. This provision made it possible for every competent architect in the State to become a registered architect. The constitution of the State does not permit of retroactive laws, so that the applicant who may have been denied registration still has the right to use the title as he used it prior to April 28th, 1915, even though he was unable to present satisfactory evidence of ability to the Board of Examiners.

The above waiver provisions, which are essential in a just law, place a great responsibility upon the Board of Examiners; they are called upon to recommend the issue of certificates to persons of varying grades of ability without any minimum standard except such as they may consider just to the applicant considering the scope of his practice; then there is also the danger of granting a recognition to one applicant and not to another who may be a competitor, while the difference as to the essential requirements may be slight, but still enough to justify the Board in its action upon a judicial review. In New York State nearly two thousand applications for registration were made under these waiver clauses, the established architect recognising the importance of the principle involved, those who desired to prove their right to recognition though not prominent in the profession, and possibly others who believe that there is some commercial advantage in State registration.

There are two provisions of the law which make examinations unnecessary if the Board is satisfied as to the competency of the applicant; while perhaps not in the order as indicated by the Act, let us first consider the provision for registration when the applicant has been certified as an architect in another state or country where the standard of qualifications is the same, not lower than that of the State of New York. This compels the Board of Examiners to consider continually the standards required in other states or countries, that a comparison may be made before the acceptance of an application under this provision. It has the advantage, however, of requiring the Board to inform itself of the advances made in the requirements of similar Boards in other states or countries, and is therefore instructive and will lead eventually to a standardisation of the minimum requirements of all Boards, with the result that the term " architect " will have a clear definition in law; this definition has long been needed in our state, and is much needed elsewhere.

The Act also provides that the Board may accept as evidence certificates or diplomas in architecture from colleges having certain academic and technical courses that have been approved by the Board of Regents, provided that the applicant has had three years of practical training in the office of a reputable architect subsequent to his college course. This places in the Board of Regents the power to standardise the academic and technical training in architecture for all colleges as far as relates to registration in the State of New York, and will raise the standard of many schools which now have courses in architecture which, while good, fall short of the requirements of the law. All such schools will undoubtedly endeavour to so develop their course that their diplomas will have a real value.

The Act provides that applicants may be granted the right to practise under the title of architect by examination; in fact, there is no other way of obtaining such right except as above noted—*i.e.*, by certification in another state or country and by certificate or diploma from an approved college with subsequent experience.

The examinations are conducted by the Board of Regents, the questions being prepared by the Board of Examiners. As a preliminary to examinations in architecture the applicant must pass a Regent's examination as to his academic training. Generally this comprises a high school course or its equivalent, with additional requirements in several courses which are usually included in the first two years of a college course. It is not essential that this education shall be acquired in a school or college; the door is left wide open for the ambitious man whose circumstances do not permit his attendance at a high school or college, but subsequent to such high school course or its equivalent he is required to have had five years' experience in the office of a reputable architect. The examination for such an applicant covers his knowledge of the history of architecture, historical styles, plan and design, construction including knowledge of the properties of materials, electric, heating, and mechanical installations, and specifications, contracts, laws and ordinances and other business requirements relating to the practice of architecture. The examinations are particularly directed to the ascertainment of the information and intelligence of the applicant as an adviser to the owner, rather than strictly technical in character.

The above summary of the law indicates its broad scope and the efforts of the framers to do justice to all engaged in the practice of architecture, and clearly defines the required education of those who desire to be styled architect.

The administration of the law rests with the State Education Department, the Commissioner of which acts as executive for the Board of Regents of the University of the State of New York, which is the ruling body in all matters involving education in the State. The Regents exercise similar control over medicine, law, and many other professions requiring educational attainments, wherever laws have been made requiring registration. The Board of Examiners in architecture is appointed by the Regents; it prepares and rates all examination papers, except those relating to academic tests; it recommends action with its findings, all final action being in the hands of the Board of Regents.

The fee for registration is $25, and no provision is made for an annual fee. The question of an annual fee may be considered from two points of view: It is objectionable to many architects who feel that it establishes a permanent charge for the right to practise an honourable profession, placing him in a class with those having special privileges in the highways and public places; from another point of view the annual fee involves annual registration which facilitates the enforcement of the law, as the record is corrected each year by such registration; the fee may be a nominal one, covering the cost of recording. In the absence of a fee in New York it is the intention of the administration department to furnish lists of registered architects to all reputable organisations of architects throughout the State.

The above outline of New York law indicates the principal points which were in the minds of its framers; but the subject is a broad one, and much thought and effort will be required to develop this and similar acts in other states and countries.

Let us consider the relation of the architects in this State to those engaged in practice in other states. Ten states of the Union have sought by law to define the academic and technical requirements of those who desire to use the title architect. It seems perfectly possible and most desirable that the minimum standards for practice in all of the states should be the same; but there are the states which have no standards whatever, where any one may call himself an architect, and competent architects residing in such states are under the necessity of taking examinations in neighbouring states before being permitted to practise in such states. This seems to be a restriction upon their right; but the answer is clear—the obligation rests upon them to qualify by law in their own state. The minimum standard should be established in every state and country; it should be the same standard; it should be raised from time to time to meet the economic and æsthetic advances. The approach to public perception of the fundamentals of our profession must be prepared by the members of our profession at much personal sacrifice; the goal—that is, the combination of the beautiful, the substantial, and the social—is worthy of all effort.—*W. B. Bannister, in "The Architectural Forum."*

Housing and Town Planning Committee.

In view of the Society's active co-operation in various movements in connection with these matters, the Council have formed a special Committee to deal with the many questions arising. One of the duties of this Committee will be to watch the interests of the profession in the direction of endeavouring to secure the employment of competent architects on housing and town planning schemes.

Qualifying Examinations.

Examinations to qualify for membership and graduateship of the Society were held in London, Liverpool, Manchester, Leeds, and Cardiff on March 27th to 30th.

The following candidates satisfied the examiners:—

Membership.

J. M. Marshall, The Laurels, Cross Lane, Grappenhall, Cheshire.
E. T. R. Sample, 38, Grosvenor Terrace, York.

Graduateship.

Carlos Varanona Villasenor, Southdown College, Eastbourne.

Proceedings.

An Ordinary meeting of The Society of Architects was held at 28, Bedford Square, London, W.C., on Thursday, April 12th, 1917, at 6 p.m. The President, Mr. E. J. Sadgrove, F.R.I.B.A., having taken the chair, the minutes of the previous meeting were read, confirmed and signed.

The ballot was then taken for the following candidates for membership, and was declared to be unanimously in their favour:—

Clark, Henry Stanley, 68, Brondesbury Villas, Kilburn, N.W.
Johnson, Thomas Foster, 4, Branksome Road, Norwich.
Keefe, Richard Cyril, 11, Fleet Street, Dublin.
Le Grove, Walter, Brier Cottage, Holland Avenue, Cheam.
Rosser, Walter, 8, Gelli Crescent, Risca, Mon.

The proceedings then terminated.

An Ordinary meeting of The Society of Architects was held at 28, Bedford Square, London, W.C., on Thursday, June 7th, 1917, at 6.30 p.m.

The President, Mr. E. J. Sadgrove, F.R.I.B.A., having taken the chair, the minutes of the previous meeting, having been published in the *Journal*, were taken as read, and were confirmed and signed.

Four nominations for membership were announced, and also the admittance to the Register of Graduates by the Council of Carlos Varadona Villaseñor, of Southdown College, Eastbourne, on passing the qualifying examination.

Mr. R. Goulburn Lovell, A.R.I.B.A. (member), then read a paper entitled "Coal Concreted from Ashes and Dust." A discussion ensued, in which the following took part:—

The President (Mr. E. J. Sadgrove, F.R.I.B.A.); Mr. J. Horace Bowden, M.I.E.E., Chief Electrical Engineer, Borough of Poplar; Mr. C. Lloyd Jones, A.M.I.E.E., M.I.M.E., Principal of the West Ham Testing Laboratory; Mr. H. V. Lanchester, F.R.I.B.A.; Mr. W. R. Cooper, A.M.Inst.C.E., M.I.E,E,, Editor of *The Electrician;* Mr. Noel D. Sheffield, F.S.I.; Mr. Dean Chandler, of the South Metropolitan Gas Company's Laboratory; and Mr. Aspinall.

Mr. R. Goulburn Lovell dealt with the various points and questions as they were raised, and at the conclusion of the discussion a hearty vote of thanks was accorded to him.

The proceedings then terminated.

"Coal Concreted from Dusts or Ashes."

By R. Goulburn Lovell, A.R.I.B.A., M.S.A.

WHEN in France, last year, lecturing to the troops, I found the dearth of fuel so pronounced that, at one of the largest training camps, there was a constant peril of the supplies entirely failing. The suffering was most acute last winter. As you are aware, our frugal neighbours utilize their coal dust by compressing it into briquets. The plant is costly, considerable pressure is required, and, although the resultant fuel incandesces fairly well, it does not flare nor does it coke.

At the beginning of the year, during the very hard weather, the lack of supplies from England made it necessary to use up the coke dust, slack or *debris* of any calorific value. One's efforts were directed to finding some matrix that might bind the dust and ashes to form a fuel quickly. A fuel that would not disintegrate in the fire or during transportation.

It can be assumed that the supply of fuel to-day is as important as the supply of bread. Yet millions of gallons of petrol and tons of valuable chemicals are wasted every year under our present system. One of the most important questions in national reconstruction will be a better and saner use of fuel. The subject is now being investigated, and remarkable developments may be expected in the direction of the utilization of power and heating and the utilization of by-products.

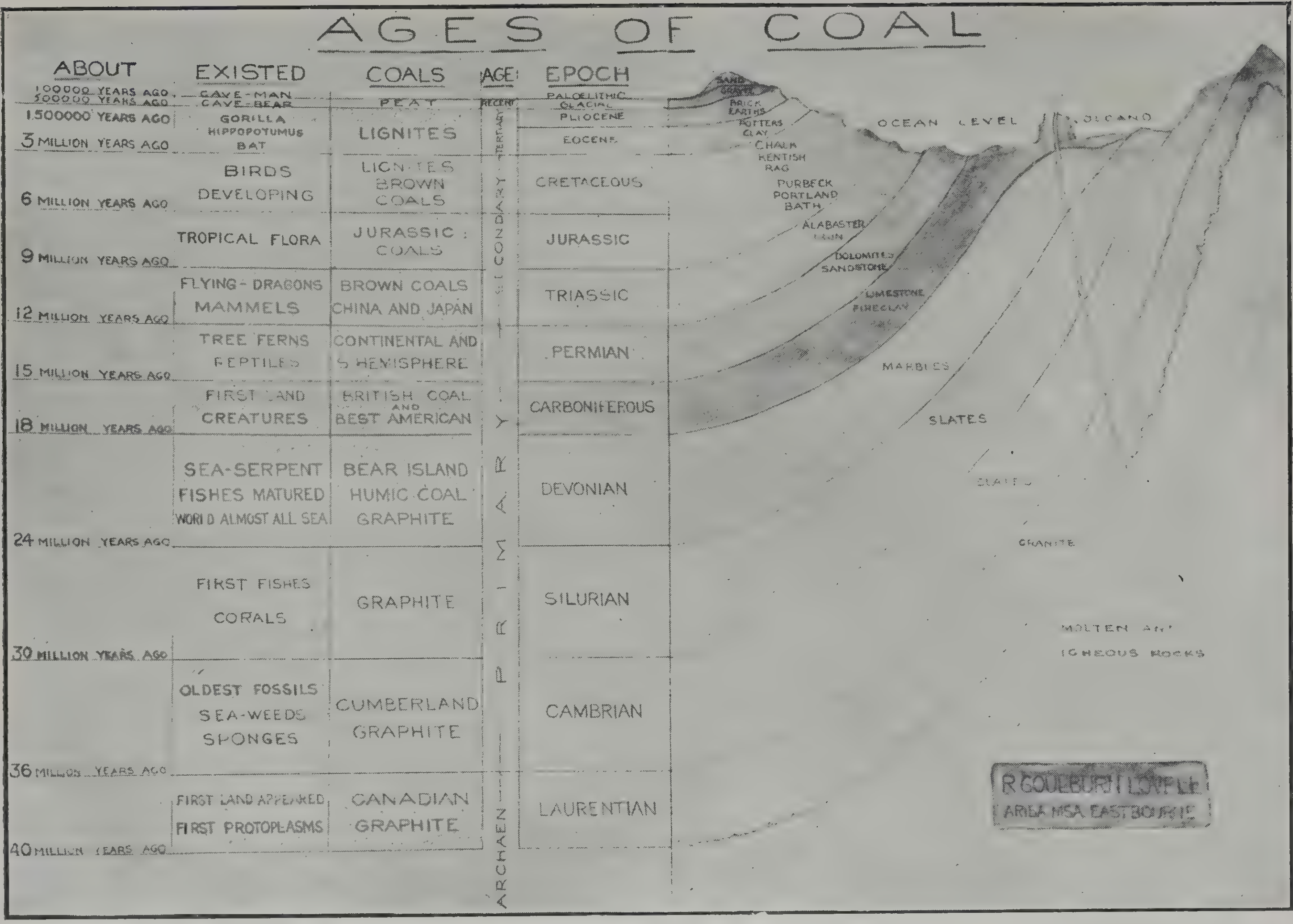
In co-operation with my friend Mr. C. M. Hughes, we have evolved a process which will enable a fuel to be made without pressure at any industrial locality from the waste products to be found in that locality which may possess any calorific value. This process is a humble but very important part of a great scheme for the proper utilization of fuel. It provides for immediate necessities and utilizes a residual product now of comparatively small value.

I have prepared a rough chart showing "The Age of Coals." Previous to the forty million years which are there shown, our old world had been spinning round in space, slowly solidifying, acquiring its rocky crust, its ocean and its atmosphere. This process had possibly been going on at least since seventy million years ago.

Thirty million years ago, during the Silurian Epoch, graphite, the first of the coal family, was forming. The first fishes can also be traced in this epoch.

During the next epoch (the Devonian) sea serpents were developed from fishes. To this epoch belong the seams of coal on Bear Island. They are the oldest known humic coals in the world—about twenty-four million years old.

The Carboniferous Epoch lasted from about twenty-four million to eighteen million years ago. That is, for during six million years the greatest and finest coal measures of the world were being formed. Certainly in England and Wales our coals are practically all of the earlier Carboniferous Epoch. In the United States all the most important coals are of the same epoch, but on the Continent and in the Southern Hemisphere generally the coal measures are of the later Carboniferous Epoch and also of the Permian Epoch, which lasted up to about fifteen million years ago.



AGES OF COAL

ABOUT	EXISTED	COALS	AGE	EPOCH
100000 YEARS AGO. 500000 YEARS AGO	CAVE-MAN CAVE-BEAR	PEAT	RECENT	PALOELITHIC GLACIAL
1.500000 YEARS AGO 3 MILLION YEARS AGO	GORILLA HIPPOPOTUMUS BAT	LIGNITES	TERTIARY	PLIOCENE EOCENE
6 MILLION YEARS AGO	BIRDS DEVELOPING	LIGNITES BROWN COALS	SECONDARY	CRETACEOUS
9 MILLION YEARS AGO	TROPICAL FLORA	JURASSIC COALS		JURASSIC
12 MILLION YEARS AGO	FLYING-DRAGONS MAMMELS	BROWN COALS CHINA AND JAPAN		TRIASSIC
15 MILLION YEARS AGO	TREE FERNS REPTILES	CONTINENTAL AND S HEMISPHERE	PRIMARY	PERMIAN
18 MILLION YEARS AGO	FIRST LAND CREATURES	BRITISH COAL AND BEST AMERICAN		CARBONIFEROUS
24 MILLION YEARS AGO	SEA-SERPENT FISHES MATURED WORLD ALMOST ALL SEA	BEAR ISLAND HUMIC COAL GRAPHITE		DEVONIAN
30 MILLION YEARS AGO	FIRST FISHES CORALS	GRAPHITE		SILURIAN
36 MILLION YEARS AGO	OLDEST FOSSILS SEA-WEEDS SPONGES	CUMBERLAND GRAPHITE		CAMBRIAN
40 MILLION YEARS AGO	FIRST LAND APPEARED FIRST PROTOPLASMS	CANADIAN GRAPHITE	ARCHAEN	LAURENTIAN

During the Secondary Geological Age the crocodiles and first land creatures developed into mammals and the flying dragons into birds. Tropical flora was everywhere. Coals of these epochs (about twelve million years back) are found in China and Japan. There are also some examples in Britain, in Hungary and in Russia. During the Cretaceous Epoch brown coals and lignites were developed in the Rocky Mountains, Alaska, Japan and elsewhere (between six and three million years ago).

The Tertiary Age lasted about two and a half million years, during which the bat, crocodile, hippopotamus, horse and the ape have appeared and developed. Modern trees and flora appeared. Brown coals and lignites occured in the deposits of this age in Germany, Hungary, Russia, Japan, Australia, New Zealand and elsewhere.

The present age began about half a million years ago. First came a period of several advancing and retiring glacial movements over the Northern Hemisphere, and during the last hundred thousand years the Cave-man, with his flint hatchet, has advanced to what he is to-day, with his scientifically murderous methods of warfare. Of this age peat is the only form of coal formations.

The word coal or coke until recently meant fuel, but to-day it means any of these carbonaceous rock formations which may be used as fuel—such as brown coals, sapropelic, humic and anthracite coals. Outside of his list, at one end, is peat and at the other graphite; both of these belong to the coal family. The ages of all are shown on the chart.

The various varieties appear to pass from one to another. We all know the vast difference in the ordinary house coal; they are classed under the general title of Humic or Bituminous; some of them have similar qualities to the brown, others to the sapropelic or to the anthracite coals.

It is not the age alone which determines these various characteristics. The idea is now discredited that peat, during the ages, has passed through the various grades of coal until it became anthracite. By a careful study of the associated rocks and the coal measures themselves, various theories have been advanced as to the original substances and the methods by which the various coals have been formed.

During the seventy odd million years required to mould the globe from a molten mass to its present, the great volcanic upheavals produced repeated contortions of the earth's surface. These violent contortions and the glacial movements of the Northern Hemisphere account for constantly recurring physical actions of varying forms.

Therefore, it is urged that by a combination of these various operations, during millions of years, the innumerable varieties of coal throughout the world have been produced. The deposits or aggregates vary, the matrices vary, and the methods of production vary. Consequently it may be said:—There is no standard coal. If this has been made clear, the difficulties of making an exposition of our artificial coal will at once disappear.

The main problem before us is:—

(*a*) The utilization of the waste products of any calorific value.
(*b*) The production by unskilled labour and existing machinery.
(*c*) The saving of transport.

If a method of production could be found by which an aggregate of breeze could be concreted by such matrices as lime, pitch or sugar waste, the main problem would be nearly solved, Every architect or engineer will recognise the possibility of concreting by the addition of lime, chalk, or other calcium carbonate. They will also recognise the need of carefully apportioning the various aggregates to avoid too dense a substance on the one hand, or too open and friable a substance on the other

In producing a satisfactory fuel, the main objects aimed at would be non-friability, good flare, non-caking, good coking, good incandescence and non-clinkering, otherwise a free combustion with good calorific value at a low price.

When one considers Nature's varying methods of producing coal, it will not be difficult to understand that man must not expect to produce it on any one uniform plan. The characteristics of the varying aggregates and of the varying matrices, require that the waste products of each locality should be carefully studied before determining upon the most satisfactory method.

Further, the use to which the fuel has to be put must be considered; that is, if it be required for open grates or closed stoves; or if a high calorific value or a bright burning coal be the chief desideratum. It has been ascertained, however, that from these varying conditions certain relative proportions can be determined of a more or less uniform character, and this has been systematically done.

A coal is here shown which has been concreted from coal dust alone, another from coke dust alone, another from destructor ash alone, another from destructor ash and coal dust, and another from clinker, bar ash and sawdust. It will be seen in the fire that the better grades burn like Nature's coal, the lower grades like coke; they all flare, coke and incandesce. Further, these artificial coals will be found to be more lasting; in the same way as a good artificial stone is more lasting than most stones made by Nature.

The machinery and plant required practically exists in all industrial centres. The essentials are crushers or breakers, screens, drying tables, mixers and moulds such as cast away pails, baths, etc. For the cooking process either ovens or boilers can be used, the main object at the present time being to utilise any existing plant and any unskilled labour.

The cost depends mainly upon the value put upon the bases, the cost of the matrices, such as glucose and other sugar waste, pitch and other bitumens, and the cost of the chalk or other calcium carbonates. For instance, the destructor ash and clinker at Eastbourne is valued at 6d. a ton, whereas at Birmingham an allowance is made of 2s. 6d. a ton. The coke breeze in London is valued at 6s. a ton, and in Birmingham at 1s. The price of hard pitch is quoted 38s. a ton at Eastbourne, 22s. at London, and 18s. at Birmingham. On the other hand, the price of chalk is 3s. 6d. a ton at Eastbourne, 6s. at London, and 16s. at Birmingham.

Speaking generally, the cost of the materials of these seven typical examples would be, roughly :—

CALORIFIC VALUES. B.T.U.S'.	SAMPLES.	PER TON. s. d.
7,500.	No. 1, Eastbourne destructor ash	11.0
8,040.	No. 2, Maples destructor and coal dust	4.6
10,320.	No. 3, Maples destructor and sawdust	9.0
10,540.	No. 4, Birmingham destructor and coal dust	8.0
11,840.	No. 5, Birmingham coke dust	7.0
12,600.	No. 6, London coke dust	10.0
12,820.	No. 7, Staffordshire coal dust	10.0

The cost of the labour and establishment charges in the British Isles should not be more than 5s. a ton.

The calorific value of each sample is shown in the left column.

This schedule makes the following facts evident:—

1. That the millions of tons of coal-slack can be concreted, without pressure, into an excellent coal.
2. That all the powderous brown coals can also be concreted into a good transportable coal.
3. That all the coke dust, accumulating in the gas works, can be similarly utilized.
4. That an excellent fuel can be produced from sawdust in all the timber countries of the world.
5. That the household ashes and the municipal destructor can be made into cheap flaring coke.
6. That most industrial concerns consuming more than ten tons of coal a day can reduce their bill by perhaps one-third, and also use up part of their accumulating waste products.
7. That this work can be done by existing machinery and unskilled labour.

I therefore invite your consideration as to whether our main problem is not solved. I submit that these various aggregates or *debris* can be concreted into fuel by man in twenty minutes, or if you like in twenty days; while Nature's better but longer process has acquired twenty million years!

When it is remembered that over fifty million tons of coal were exported last year from the British Isles, the national and international importance of this process of making a good fuel will be at once seen.

This question should be taken in hand at once, so that we and our Allies may be ready with next winter's fuel supply.

THE PRESIDENT, in inviting discussion, said it might seem strange than an architect should be responsible for a discovery of this nature. Probably some people still thought it was an architect's business only to draw up plans for houses and arrange with the builder to have them erected, but in his view an architect's technical training and experience fitted him for research into far wider fields. It was his duty to keep in touch so far as possible with all matters likely to affect himself or his clients in any way, and he should be a master of hygiene, heating and lighting, and all other things in connection with building operations. The more he knew of them, the more satisfaction he was likely to give his clients. In his Presidential Address he had invited architects, if they could not at present go ahead with the T-square and drawing-board, to get into other fields and divert their professional abilities into other and more immediately urgent channels for the good of the national interests. Mr. Lovell's paper showed that he shared that view.

Mr. J. HORACE BOWDEN, M.I.E.E. (Chief Electrical Engineer to the Poplar Borough Council) said that from the electricity works point of view the removal of ashes and clinker in London at the present time was a very serious item. He had 150 tons per week to get rid of, which was costing him, even with four motor wagons, 3s. 6d. to 4s. per ton to remove, and he had received notification that he would not be allowed to shoot any more ashes on the present dump. That was only one comparatively small works, and what would happen when all the shoots were filled up he did not know. He asked what was the residue of the new fuel when it was burned? Was it clinker, and could it be treated so that there was a sort of perpetual motion going on? Then what were they burning? Was it the actual value of the calories left in, or were they added and simply taken out again? He took it that what it amounted to was that every fuel must vary according to what was left. In his case he knew that in the ashes there were the riddlings that went through the chain grates, which represented a considerable amount of useful coal. This went away in the ashes. He had tested this and found it contained about 4,000 or 5,000 B.Th.U., and it was this he was paying 3s. 6d. a ton for having carted away. If this were treated in the manner suggested, what could the author bring it up to? He had also destructor ash amounting to 20 or 30 tons a day, which he never thought there was much heat value in because it was large clinker which had to be broken up to be carted away. Did the author think this was of any value? If he could have some idea of the cost of a plant capable of dealing with 30 or 40 tons a day, he was sure that his Council would be prepared to consider it very carefully.

Mr. Lovell said he understood from Destructor superintendents that the large clinker was of considerable value for road construction. Their trouble was that they could not get anything for the bar ash, and it was this which he was anxious to handle, as there was considerable value in it. He suggested that Mr. Bowden should send him a sample of his ash to test, but judging from what had been done elsewhere it might be assumed that the calorific value of bar ash, if it had a value of 4,000 or 5,000 B.Th.U., could be largely increased; in some cases, by the addition of coal dust, it had gone up to over 10,000 B.Th.U. He could not say what the cost of new plant would be. His idea was that there was much plant lying idle about the country—such as concrete mixers—which could be used. For the cooking process of making the fuel, tar boilers could be used. It would have to be hand stirred in that case, and, therefore, some form of rotary boiler would be much better. In his tests at Eastbourne he had used old pails as moulds. The material was merely pressed down' allowed to cool, broken up, and then exposed to the air for some little time. The longer it was exposed, the harder it became. At first it was rather friable, but after three weeks it was very hard. The resultant ash from the burning of this fuel could be used over again, with, of course, diminished calorific value.

Answering further questions by various speakers, Mr. Lovell said that there were three methods of making this fuel. The mixture could be placed in moulds and baked, it could be put into boilers, and then emptied into moulds, or in sunny climates it could be mixed and allowed to remain exposed to the heat of the sun. The time taken to cook two or three gallons, as in the tests, was about twenty minutes, and this time could be taken as applying to any quantity according to the size of the receptacle. As to the cost of making, he had received estimates from responsible people to make the fuel at 6s. per ton.

Mr. C. Lloyd-Jones, A.M.I.E.E., M.I.M.E. (Principal of the West Ham Testing Laboratory), who said he had been responsible for making most of the tests, remarked that when the first sample came into his hands his assistants thought there was some joke on, that somebody was trying to make coal out of rubbish, but as further samples came in, they began to realise what was going on, and they noticed one thing—viz., that the binder was entirely different to anything that had previously come into their hands. Up to the present, although he had some inkling of what it was, they had no definite clue. One striking thing, mentioned in one of his reports, was that the volatile matters were given off without any visible smoke.

Mr. Lovell said the binder in that case was sugar waste and chalk.

Mr. Lloyd Jones said that that, as a binder, had never before been used for briquetting coal or refuse. Would Mr. Lovell give the proportions of binder to raw material, and so enable them to find out whether anything was being gained or not?

They wanted to find out if under the process heat energy was being made, which, it may be said, was impossible. At the same time, there was some truth behind the suggestion that by the use of the ashes from the burned artificial coal they could go on for ever. One of the most valuable heat producers was iron. If they had red-hot iron and put it in an atmosphere of oxygen, heat would be generated, and he thought that possibly at the temperatures in the furnace something of that sort would occur with the material that was there present before them. He did not quite agree with the author's explanation of the laying down of the coal measures, but that did not affect the main point of the paper.

Mr. H. V. Lanchester, F.R.I.B.A., asked why the author used a mould in his experiments, and what the matrices were.

Mr. Lovell said the moulds were used only that the mixture might concrete. His main object was to use the dumps *in situ*, and so do away with transport. For the most part the matrices were procurable in the immediate neighbourhood, or, in any case, would not have to be transported very far, and by using such things as pails and existing mixers on the spot instead of erecting a permanent plant, the dumps could be used up where they were. Generally speaking, not much other material would have to be added, and the cost of transporting this to the dumps would not be very great. The matrices were either any form of sugar waste of any form of pitch, together with any form of calcium carbonate.

In reply to a suggestion that the cost of coal slack in London would be nearer 18s. or 20s. a ton than 10s. as stated in the paper, Mr. Lovell said he had had it offered to him at 8s. or 10s. The cost of the materials, however, varied throughout the country.

In reply to other questions, the author said that marble dust or limestone dust could be used. The temperature at which heating took place was 100° to 120°. One of the most important things, as with concrete, was accurate mixing. Even cement would do instead of calcium carbonate.

Mr. W. R. Cooper, A.M.Inst.C.E., M.I.E.E. (Editor of *The Electrician*), was not quite sure that the author realised what was already being done in the way of briquetting, and it must not be assumed that coal slack or coke breeze was not being used for steam raising. Therefore all that remained was the fine dust, and he did not know that there was so much in that as the author seemed to imply. Waste coal had a very high ash which was very much against it for general use. There was a popular idea that there was a great deal of waste coal to be had at the pits, but that was not the case. One of the points mentioned was good flare, but he did not know that it was a good point, because it meant smoke due to the volatile matter, and volatile matter should be low in a perfect fuel. The tendency at present was to carbonise and recover the volatiles. Could the fuel be used advantageously in that way? He also asked for more information about the actual process as carried out, as without this it was difficult to judge as to its practicability and workability and also the cost of working. The author added incombustible matter to his fuel. Taking the destructor clinker shown, he did not know whether it was a representative sample, because it was rather high in B.Th.U. value to start with. With an efficient destructor it should be lower, but he would like to know the percentage of ash in the fuel to start with and the percentage of ash in the final product. How much incombustibles did the author add, because, obviously, the higher the ash the less the value of the fuel. It was unfortunate that the patent specification could not be disclosed at the present moment.

Mr. LOVELL handed Mr. Cooper a file of test results, which he said would give him a good deal of the information he had asked for. As to flare, that was only desirable with a domestic fuel, because people liked to see a flare. For steam raising he would not trouble to create flare. The difficulty was to obtain a standard formula, as it must vary with the different products which it was desired to make use of. The process was a simple one. The material was well mixed with the matrices in proportions which would have to be determined in each case, and then was boiled, baked or dried without any pressure. The appliances necessary, as he had explained, were simple and primitive. The only complex thing was the mixing. He had been advised that the specification could not be published at the present time, but he was willing to give all the information in his power.

Mr. H. V. LANCHESTER, F.R.I.B.A., said that what perplexed him from the scientific point of view was the addition of calcium carbonate to the mixture. The calcium carbonate was decomposed, and that was an endothermic process and heat must be absorbed; it would not add to it, and he did not know why it was used. The same remark applied to chalk.

Mr. LOVELL said the answer was the same. It was a matrix and helped in the concreting. Probably the same result would be obtained with a smaller proportion of cement. Free lime could also be used with the same result.

Mr. LLOYD JONES said that some years ago he carried out experiments with chalk for making producer gas, in which he mixed chalk and coal and got extraordinary results. The process was ultimately adopted by the cement combines in the United States. In heating the chalk CO^2 was given off, and passing that through an upper bed of incandescent carbon resulted in carbon monoxide being given off. The producer gas was capable of being used, but it had the danger of being poisonous.

Mr. LOVELL said that carbon monoxide was produced, but it was very much diminished.

Mr. ASPINALL asked whether it was suggested that taking ashes from a destructor and adding some Staffordshire coal, the calorific value of the ashes was raised from 5,000 B.Th.U. to 10,000 B.Th.U. It seemed that taking the value of the Staffordshire coal at 12,800 B.Th.U., calorific value was lost in the process.

Mr. LOVELL explained that taking half Staffordshire coal and half destructor ash, the total calorific value was increased from 5,000 B.Th. U. to 10,500 B.Th.U. —*i.e.*, the value of the ashes plus half the value of the coal.

Asked if the ash from anthracite stoves could be used, Mr. LOVELL replied that it could, and in reply to another question Mr. Lovell said that the cost of distribution was included in the cost of manufacture, whatever the figure was, for the purpose of the licence.

The PRESIDENT thought the discussion had been most interesting, and must be encouraging to the inventors. From practical standpoint he could only say "that seeing was believing." He and the members of Council present had satisfied themselves that the excellent fire they then saw burning had been lighted direct from the wood; no coal had been used excepting that made by this new process, the bases were there for them to examine—ashes and a fine coal-dust. The samples of fuel which had subsequently been added at the request of the meeting were composed of a coke dust alone, without any bituminous binder, a coal dust alone and another composed of sawdust and ashes. They all seemed to burn equally well, and some with very little smoke indeed.

On the motion of the PRESIDENT, a hearty vote of thanks was accorded the author, and the proceedings terminated.

A CONCRETED COAL.

A means of utilising waste products, such as destructor and boiler ashes, coke dust, coal dust, sawdust, etc., was described to The Society of Architects, on Thursday of last week, by Messrs. R. Goulburn Lovell and C. M. Hughes. The object aimed at is to evolve a process which will enable a fuel to be made, without pressure, in any industrial locality from the waste products which may possess any calorific value to be found in that locality. Certainly, the process should have some future, if the authors can justify it in operation on a large scale, for at present the ashes from boilers have to be carted away at considerable cost, and yet it is known that the riddlings that fall through the chain grates and go away with the ashes have a considerable calorific value.

The method proposed is a concreting one. The particular waste product is taken and is mixed, either by hand or in a concrete mixer, with certain proportions of sodium carbonate and bitumen or sugar waste. Sodium carbonate is essential, and the last two are alternative. This mixture is then placed in moulds or in boilers, or may remain exposed to the sun in tropical or sunny climates. When placed in moulds external heating is applied, and after pitch were used, but equally good results with sugar waste are on record. The temperature at which the process is worked is from 100 deg. to 120 deg. Apart from the claim that the process enables present waste products to be usefully employed, it is urged that it does not require special apparatus or skilled labour, and, furthermore, can be carried out on the site where the waste product is to be found.—*The Engineer.*

THE CONCRETING OF COAL.

The utilisation of waste coal has a certain fascination, which is due, no doubt, to the popular idea that a very great deal of coal is at present wasted and might be usefully employed. In this connection, however, it must be remembered that the advent of the mechanical stoker has altered the aspect of affairs very materially. Slack, and even coke breeze, can now be used for steam raising to an extent which at one time seemed quite improbable, and, therefore, the waste is reduced to coal dust and to certain low grades of coal which at present may not repay the cost of handling. Such coal dust and slack as is available is already used to some extent for briquetting. The usual methods, however, require special plant, and no doubt there is an opening for other simpler methods for this class of work. From this point of view the process outlined by Mr. R. G. Lovell in his paper before The Society of Architects may be welcomed. But we feel that Mr. Lovell is not on very safe ground when he deals with the utilisation of ashes, except, perhaps, in so far as these may be obtained from the domestic grate. In that case, however, there is the difficulty of collection. In steam-raising plant the calorific value of the ashes is, no doubt, in many cases undesirably high, but we think this merely indicates defective methods. The percentage of combustible in the ash should not exceed 20 per cent., and may be considerably less. This view is borne out by tests which were published in *The Electrician* of January 19th last. It appears to us that steam raisers should improve their methods in preference to attempting to make an inferior fuel from ash. It is no doubt possible to make ash into a comparatively good fuel by mixing a considerable proportion of good coal dust therewith; but this method may be looked upon equally as the transformation of good coal dust into comparatively poor material by mixing with it a large proportion of incombustible material in the form of ash and a binder of some kind. So far as we can judge by the very meagre details given by Mr. Lovell, there may be a future for this process if it is run on the right lines; but we fear that he is inclined to allow his enthusiasm to run away with his discretion. For example, to state that "all industrial concerns consuming more than 10 tons of coal per day can reduce their bill by at least one-third and also use up their accumulating waste products" is to invite distinct scepticism. Any such claim is altogether improbable, and would lead to the conclusion that such industrial concerns are at present guilty of extraordinary inefficiency. —*The Electrician.*

INVENTOR EXPLAINS A WONDERFUL PROCESS.

Prominent scientific and commercial men were present at a meeting of The Society of Architects at Bedford Square to-night to hear from Mr. R. Goulburn Lovell, A.R.I.B.A., M.S.A., the story of a wonderful discovery in producing "coal from concreted breeze, sawdust, and ashes." Great interest has already been created by the discovery, under which it is claimed that a good fuel can be produced which will flame, coke, and incandesce like coal. Mr. Lovell gave some interesting demonstrations, indicating how excellent coal is produced from coal slack, coke dust, sawdust, or destructor ash, either in combination or separately with a simple plant—which can easily be erected in each locality—and without pressure. What is claimed for the simplicity of the invention is that by the method of local manufacture considerable economy will be effected in the cost of transport. The calorific test of this manufactured coal is in some cases over 12,000 B.T.U.—equal to Nature's coal.

The speaker continued that, in co-operation with his friend, Mr. C. M. Hughes, he had evolved a process whereby a matrix that would bind dust and ashes of calorific value could be produced. His chart of "The Age of Coals" showed how during forty million years innumerable varieties of coal were deposits resultant from land formation in the famous geological epochs. The deposits varied, the matrices varied, and the methods of production varied. Thus, it could be said that there was no standard coal. The matrices which Mr. Lovell submitted for consideration in connection with his scheme, such as lime, pitch, or glucose, varied with the locality, as the requirement of the waste products varied. The machinery and plant necessary for the making of these artificial coals practically existed in all industrial centres, and the cost of the labour and establishment charges in the British Isles would not be more than 5s. per ton. The débris could be concreted into fuel by man in twenty minutes, while Nature's better, but longer, process required twenty million years!

The experiments in the room proved satisfactory, and the society extended congratulations to Mr. Lovell and his partners, on the motion of the President (Mr. E. J. Sadgrove).—*Western Mail.*

AN ARTIFICIAL COAL.

It has fallen to an architect, Mr. R. Goulburn Lovell, to discuss a method whereby central station engineers can, perhaps, dispose of the ashes from their boilers, and also from their refuse destructors, where they have to operate these. Mr. Lovell believes, in fact, that with Mr. C. M. Hughes, he has evolved a process which will enable a fuel to be made, without pressure, in any industrial locality from the waste products to be found in that locality, which may possess any calorific value. The immediate interest, therefore, to central station engineers is in respect of their ashes and clinkers, which, it is common knowledge, possess a certain small calorific value, owing to the riddlings that fall through the grates, and which the station engineer actually has to pay for to be carted away. In brief, the authors propose to take any material which is at present a waste product and may be presumed to possess some calorific value, and to concrete this by such matrices as lime, pitch, or glucose, in conjunction with, say, coke breeze, coal slack, or coal dust. In presenting a paper on the subject at The Society of Architects on Thursday, Mr. Lovell showed samples converted from coke dust, coal dust, destructor ash, destructor ash and coal dust, and from clinker, bar ash and sawdust. They were shown burning in the grate at various times, and certainly burned well and easily. The process is simplicity itself, and may be carried out in either of three ways; but the commercial value of it to the authors is the formula giving the proportion of binder, etc., with any particular waste product which it is proposed to use. This artificial coal may be made by heating the mixture in any receptacle, even a pail; it may be boiled in a tar boiler; or in the Tropics, for instance, it may be mixed and allowed to remain exposed to the sun. Under artificial heating, twenty minutes is said to suffice, and then the material is broken up and allowed to oxidise—the longer the better from the point of view of obtaining a hard coal.

There were one or two sceptics in the audience, but the author claimed to have put forward a process which merited consideration, having regard to the difficulties of coal supplies at the present moment and the need for making practical use of the various waste products in various parts of the country. So far, the process has not been worked on a large scale, but that should present no difficulty, having regard to the apparent simplicity of the manufacturing method. The one point that struck us from the burning of the fuel in the grate of the meeting room of The Society of Architects—we were seated uncomfortably close to it—was the smoke given off. Used in domestic grates, this fuel would hardly hasten the day of a smokeless London, but as the author suggested that this property is under control, he might think it worth while to add the virtue of smokelessness to his fuel, and so render that criticism untenable. At the same time, our main interest is the centralisation of the use of fuel and the total abolition of the domestic use of coal or similar fuels, in favour of electricity for lighting, heating, and power.—*The Electrical Times.*

ARTIFICIAL COAL.

Mr. R. Goulburn Lovell and Mr. C. M. Hughes are putting forth claims as regards a new form of compound solid fuel which deserves the most serious consideration. Their process enables a fuel to be made without pressure in any industrial locality from the waste products to be found in that locality which possess any calorific value. They aim at a fuel characterised by non-friability, good flare, non-caking, good coking, good incandescence, and non-clinkerable, otherwise a free combustion with good calorific value at a low price. For this the waste products of each locality must be carefully studied, and the use to which the fuel has to be put must be considered. Mr. Lovell submitted at the Society of Architects examples of a fuel concreted from coal dust alone, another from coke dust alone, another from destructor ash alone, another from destructor ash and coal dust, and another from clinker bar ash, and sawdust, and he claimed to have shown that the millions of tons of coal-slack can be concreted without pressure into an excellent coal; that all the powderous brown coals can also be concreted into a good transportable coal; that the coke dust accumulating in gasworks can be similarly utilised; that an excellent fuel can be produced from sawdust in all the timber countries of the world; that household ashes and municipal destructor ashes can be made into cheap flaring coke; that all industrial concerns consuming more than ten tons of coal a day can reduce their bill by at least one-third, and use their accumulating waste products; and that this work can be done by existing machinery and unskilled labour.—*Practical Engineer.*

CONCRETED FUEL.

It requires a combination of simplicity and courage to preface an account of a new artificial fuel with a survey of geological history designed to show that man can achieve in twenty minutes the results similar to those which Nature managed to reach in twenty million years. This was done by Mr. R. Goulburn Lovell, A.R.I.B.A., in his paper "taken as read" at a meeting of The Society of Architects last Thursday. He tells us how "the Devonian sea serpents were developed from fishes," how "during the Secondary Geological Age the crocodiles and first land creatures developed into mammals and flying dragons into birds," and how "during the last hundred thousand years the Cave-man, with his flint hatchet, has advanced to what he is to-day, with his scientifically murderous methods of warfare." All this is charmingly irrelevant to the subject of the paper: "Coal Concreted from Ashes or Dust"; moreover, it is, to say the least, doubtfully accurate. And in the remarks with which Mr. Lovell introduced his fuel at the meeting, he outlined a weird theory about coal being formed from vegetable matter, bituminous material "from the south" and calcerous material "from the north," the material and the matrices being concreted by volcanic action. We may be doing Mr. Lovell an injustice in this summary of his hypotheses, but he certainly laboured, and laboured heavily, to maintain that his patent briquettes were entitled to be described as coal. Coal, he asserts, means "any of these carbonaceous rock formations which may be used as fuel—such as lignites, brown coals, sapropelic, humic, and anthracite coals." This definition does not quite accord with the legal decision given in a famous case last century; and the fact that there is no accepted formula for coal hardly entitles anyone to use the name for a solid fuel compounded of coal dust, or sawdust, or coke dust, or destructor ash and various matrices.

It is a pity that Mr. Lovell laid himself open to playful ridicule by his excursions into the strange land of geology and his imaginative parallels between the coal beds and his concreting plant. The invention developed by himself and Mr. Hughes does not gain by this fantastic embroidery. It is nothing more nor less than a process of briquetting without pressure. In ordinary briquetting coal or other inflammable dust is mixed with a bituminous binder and made solid by pressure. In Mr. Lovell's process a certain amount of calcium carbonate is used in addition to the binding material; the ingredients are mixed, as in an ordinary concrete mixer; they are then either boiled and stirred or baked—for about twenty minutes—and the result is a material which can be broken up into lumps and transported like ordinary coal. In use this artificial fuel differs from ordinary briquettes in burning brightly and freely. The samples shown at the meeting burned with a fairly cheerful flame, but smokily, the smoke being due to the bituminous binder used. By using sugar waste instead of pitch, the smoke is reduced, but the bright flame which the householder looks for in the grate is eliminated. In the table of calorific values the figures per ton indicate the cost of the materials. It is reckoned that the cost of labour and the establishment charges in the British Isles would not be more than 5s. per ton. Therefore the practical question resolves itself into one whether the game is worth the candle, or rather whether Mr. Lovell's "coal" is worth the game. No general answer can be given to this question, because the materials dealt with vary so much in calorific value and in price. Each material demands its own formula for concreting. Further, the relations between the aggregate calorific values of the constituents and the calorific value of the concreted aggregate are wrapped in mystery. Owing to war restrictions, Mr. Lovell is debarred from publishing the complete specifications for his patents, but he went so far as to suggest that the method of concreting does add to the calorific value of the mixture. Indeed, he talked of "creating energy"—which is absurd. It appears, however, that certain reactions take place between the carboniferous materials and the calcium carbonate, leading to the formation of acetylene and carbon monoxide. But the nature of these reactions is uncertain—as, in fact, is a good deal concerning this concreted fuel.

We have devoted more space to the subject than Mr. Lovell's original geology and heretical physics might seem to justify, because the process may be of interest to central station engineers. Mr. Bowden, who opened the discussion, stated that he has to deal with 150 tons of clinker per week at Poplar, and that it costs him from 3s. 6d. to 4s. per ton to dispose of it. In addition he has to get rid of the clinker in a dust destructor. Clearly if it were possible, by using simple plant like riddles, concrete mixers, and tar boilers, to work up the dust into a fuel of fair calorific value, it would be profitable to pay the inventors their £30 to £50 for the necessary formula and their royalty of 7d. per ton. But Mr. Bowden was just as much puzzled as the rest of us about what happens in the burning of the concreted fuel, and what remains after burning. Mr. Lovell hinted that the ash could be used over again—in a form of perpetual motion. Mr. W. R. Cooper suggested that the author was not fully acquainted with all that was being done to utilise coal dust. For the rest, the discussion was as kindly as it was desultory, but it emphasised the fact that the inventors have a good way to go before they can convince central station or other engineers that it will pay them to concrete materials which, although possessing a certain calorific value, are at present worth nothing except for filling up dumps. One's first inclination is to dismiss the whole thing as another, and rather amateurish, attempt to evolve a new artificial fuel from waste products. As an architect, Mr. Lovell was well out of his depth in the chemical and physical problems involved. A good deal more laboratory research will be needed before the method of concreting is accepted as a genuine contribution to the science of utilising waste.—*Electrical Industries.*

Reviews.

The Italian Orders of Architecture: A Practical Book for the use of Architects and Craftsmen, consisting of letterpress, with thirty-two plates based on the Orders of Vignola, Palladio, Gibbs, Chambers, and other Masters. By Charles Gourlay, B.Sc. (Glasgow University), A.R.I.B.A., Professor of Architecture and Building in the Royal Technical College, Glasgow. (London: Edward Arnold.) Price 6s. net.

Excessive modesty has caused Prof. Gourlay to all but spoil what is possibly the most significant and important architectural work which has yet appeared since the century opened—significant as displaying the modern outlook towards old architectural forms, and important as indicating that this outlook, while individualistic, is instinct with appreciation of refined proportion and perfected detail. These orders are not Italian orders—they are Gourlay's orders; they are not "after" those of the masters of the past in any spirit of inferiority or even of blind copyism—but are founded upon them, and thus evolved in the best and truest spirit of advance. In this sense Gourlay deserves to rank with any of the masters, and his name to survive with theirs. Unfortunately the title is misleading, and the sub-title calculated to belittle the author. Unfortunately, too, the letterpress is conceived upon old-fashioned lines, utterly unattractive to modern students, however suitable they may have been in the 16th century; and the illustrations likewise. Yet both, when analysed, are of the highest interest and value; only they need analysis before their merits are apparent. A wonderful book it is, truly, and the result of the keenest architectural insight and most prolonged study, and given as a free gift by the author to his professional brethren; for its low price precludes profit, or even, in all probability, the mere meeting of the expenses of printing and binding.

Bench Ends in English Churches. By J. Charles Cox, LL.D., F.S.A. (Humphrey Milford, Oxford University Press, 1916.) 7s. 6d. net.

In spite of the abnormal conditions now prevailing, a volume is still produced occasionally of the series of books, under the editorship of Mr. Bond, which was commenced before the war began to illustrate and systematically tabulate the existing examples in this country of particular portions of ecclesiastical edifices, especially parish churches. The present volume, dealing with Bench Ends, is in complete conformity with those which have already appeared, in general arrangement, careful compilation, and excellence and multitude of illustration; and no higher praise is possible.

The book is in two parts, of which the first consists of a general description, in historical narrative form, while the second part contains an exhaustive list of practically all the bench ends in the country which are of archæological or artistic value, arranged county by county. Needless to say, the labour of preparing and annotating such a list is great, but the result is worth it, in the production of a book of reference of the highest value and authority. On the other hand, there is more of general interest in the first part. And it is of absorbing interest, starting with the very first sentence; for few people are aware that the custom of the whole Catholic Church, in early times, was for the congregation to stand, when not kneeling, at Divine Service. It was the same in England as elsewhere—in Russia, say, or Alexandria, where the standing position is still in accepted use. In course of time, however, stone seats along the aisle walls, or round nave pillars, were introduced for the use of the sick and aged; and such are by no means rare in the mediæval churches of our land, often, however, now obscured from view by "modern" oak pews of, say, the fifteenth century, by which time they had come into common use; though there are a few still in existence which date back as far as the middle of the thirteenth century.

Experimental Building Science. By J. Leask Manson, B.Sc. (Eng.), M.R.S.I., A.M.C.I. Vol. I. (Cambridge University Press, 1917.) Price 6s. net.

Many students of building construction join a class to learn construction without having had any previous training in elementary physics and mechanics. The object of the present book is to give a course of training in those branches of science which have a bearing on building construction so that the want of a previous science training shall not be felt. It is in a form which appeals directly to such students, as it is developed from practical experiments of an elementary character. These are very complete and cover the whole ground required. In going through the book we noted one or two points that might be modified in the next edition. In the description of a common lift pump at p. 37 it is not made clear that it is the pressure of the atmosphere upon the surface of the water outside the pump that causes the water to flow up the suction pipe when the piston is raised. This is rather a serious omission in view of the common idea that "the vacuum draws the water up." The words used in the book are "As the piston is raised from its lowest position a partial vacuum is formed beneath it, reducing the pressure in the suction pipe and causing the water to flow into it.". At p. 43 Rogers Field is mentioned as Roger Field. At p. 74 it is stated that damp proof courses should be laid through the walls at not less than 6 ins. from the ground level; the word "above" should be substituted for "from." At p. 89 Bow's Notation for lettering stress diagrams is described, but it is customary now in practical work to use figures instead of letters. There are only twenty-six letters in the alphabet, but some of the modern roof-trusses and girders require the use of more than a hundred symbols.

A Guide to Draughtsmanship: For Architects, Civil and Mechanical Engineers and Surveyors. By W. Horace Smith, with 40 illustrations, including 19 plates. (London: E. and F. N. Spon, 1917.)

There is nothing to distinguish this book from numbers that have preceded it, and there are many points we disagree with. The ledged drawing board, with screws in slots at the back, is said to be so made "that it may be adjusted, should it warp, by means of the screws." The real object of the screws so placed is to permit the board to shrink in further seasoning without opening in cracks along the grain. This is automatic by reason of the screws passing through brass slots; no tightening or loosening of the screws would remedy the board if it should "warp." A chisel point for a pencil is objected to, but every engineer's draughtsman knows that a chisel point rounded slightly on the two faces makes a fine line and lasts five or six times as long as a round point. In describing the construction of a scale, an illustration is taken of a scale of 3¼ inches to 1 foot, no draughtsman in his senses would adopt such a scale. After scratching out it is said that the paper may be burnished before putting colour on to prevent it from soaking in, but it is much better to damp the spot with clean water to neutralise the "suction" before colouring. Sectional lines are referred to on p. 32 as uniform only, but attention should have been called there to the bottom of Plate 16, where the system is shown of varying the character of the section lines according to the material that is represented. This is an important matter now that so many photoprints or black-and-white drawings are made. In the list of colours no mention is made of Payne's Grey, which is the only colour for cast iron; Indigo, which is named for that purpose, is too blue and not sufficiently distinct from the Prussian blue used for wrought iron. In lettering a drawing it is said that great care should be taken to space the letters equally, but this is quite wrong; letters such as **MN** or **IB** coming together should have more than the normal spacing on account of the near sides being parallel, while letters like **LA** or **TW** should have rather less than the normal spacing, or they will look too far apart; judgment must be exercised throughout. In block letters there should be no points, all the ends should be the same width as the thickness of the strokes. In engineer's italics (without seriffs) the Roman a is shown instead of the italic *a*, which is the usual form. With these exceptions there is much sound advice given in the 59 pages of text which form the book, and the young draughtsman will find considerable help therein when he is thrown upon his own resources.

MAINLY ABOUT MEMBERS.

HERBERT EDMONDSON (member), of Wakefield, notification of whose death some months ago has only lately been received, was articled to Mr. Arnold S. Nicholson, M.S.A., of that City, and subsequently commenced practice there, and during the last twenty years carried out many buildings of a commercial and domestic character. The late Mr. Edmondson joined the Society in 1896, and was 46 years of age.

News of the death in action last October of FREDERICK CROSS KING, of Belfast, a 2nd Lieutenant in the Machine Gun Section, has just been received, from which it appears that while waiting the signal to advance a high-explosive shell hit one of the gun emplacements, wiping out the whole team. The late Mr. King was articled to Messrs. Watt and Tulloch, F.R.I.B.A., and commenced practice in 1908 in partnership with his brother, Mr. G. G. King, at present on active service with the Royal Fusiliers. The late member joined the Society in 1914, and was 33 years of age.

DINSHAW DORABJI MISTRY, of Bombay, who died on December 3rd, 1916, at the age of 82, received his early professional training under the late Major-General Waddington, C.B., Chief Engineer to the Government of Bombay, and the late John Campbell, F.R.I.B.A., M.S.A. He joined the Society in 1889, and on relinquishing his practice after forty years' work he was placed on the list of retired members in 1911.

WILLIAM STANLEY DEAN (member), of Bournemouth, died on January 24th, 1917, after a long illness, at the age of 38. He was articled to Mr. G. A. Bligh Livesay, F.R.I.B.A., of Bournemouth, who served in the present war as a Lieutenant in the South Wales Borderers, and is believed to have been drowned on active service. The late Mr. Dean's practice was chiefly in domestic work, and some of his designs were exhibited in the Architectural Section of the Royal Academy in 1900. He joined the Society in 1911.

RICHARD CECIL DAVIES, of Chester, who died on May 17th, was one of Chester's most prominent citizens. He became a member of the City Council in 1893, and was elected Sheriff in 1901, appointed an Alderman in 1906, and elected Mayor in 1908. He was a member of the most important committees, and was chairman of the Electricity Committee. His activities were not confined to Chester, and he was at one time chairman of the Hoole District Council.

The late MAJOR DAVIES was an old member of the Volunteer Force. Serving first in the Earl of Chester's Rifles, he afterwards joined the Yeomanry, and subsequently received a commission in the Flintshire (Buckley) Engineers, in which he rose to the rank of Major. He had the long service medal and had well earned his retirement; but on the outbreak of war he volunteered for active service, was gazetted a Captain in the R.E. (Regular Forces), and made a D.O.R.E. for Chester. In addition to this, Alderman Davies was at one time Captain of the Earl of Chester's Volunteer Fire Brigade, and often acted as an umpire in the brigade competitions in Cheshire and N. Wales. By his death Free-masonry in the province loses one of its most prominent figures. He was a P.M. of the Dee Lodge, J.W. in the Province, a P.Z. in the Chapter, in which he also held provincial honours. He was a founder of the Deva Lodge, and held the office of D.C. He was a member of the Deeside and of the Hoole Bowling Clubs, and of the Bache Golf Club and the City Club. The late Mr. Davies's family have been connected with the architectural profession in Chester since about the year 1815. The late Alderman's grandfather, who came to Chester in the year 1805, was an architect and surveyor, and entered the employment of Mr. Harrison, the celebrated architect, who planned the restoration of Chester Castle and designed the City Club and other substantial buildings. The grandfather afterwards left Chester for a brief time, but returned to the City about 1815, when he started business on his own account as architect and surveyor. That business has been carried on by members of the Davies family without intermission ever since. Alderman Davies became a partner with his father, Mr. John Henry Davies, and on the latter's death became head of the firm, consisting of his brothers, Mr. Fred Davies and Mr. Horace Davies. The late Mr. R. Cecil Davies had been a member for the last ten years of the Council of The Society of Architects. He was surveyor to the Chester Rural District Council, and in his private practice was engaged on many important buildings, both in Chester and North Wales. He, in connection with his firm, carried on the work for the Chester Union and extensive alterations and rearrangements for the Wirral Union, Holywell Union, and the Hawarden Union. He and Mr. H. Beswick were joint architects for the City and County Unionist Club premises in Newgate Street. His reputation as an architect and surveyor was such that he was frequently called upon to give expert evidence in the law courts in building disputes and similar litigation. The high esteem in which the late Major Davies was held by all classes of the community was shown by the very representative gathering which assembled when he was laid to rest, with full military honours, on May 21st.

THOMAS IVOR MOORE, Assistant Director of Barrack Construction, was among the victims of the air raid on London on June 13th. He was 58 years of age and had been a member of the Society since 1904. He was a Justice of the Peace for Surrey, and was Chairman of the Governors of the Secondary School, a member of the Cottage Hospital Committee, and had identified himself closely with the social and public life of Woking, where he resided. He has been in the service of the War Department since 1883, and had served at various stations at home and abroad.

MR. P. B. HOUFTON, of Chesterfield, has been elected a member of the Council of the Town Planning Institute.

MR. G. H. WENYON, of London, who recently joined the commissioned ranks of a Battalion in the County of London Regiment (V.F.), in response to a note in the last issue of this Journal, has since been gazetted as a Lieutenant in the Cameronians for service with a Transport Workers' Battalion.

County of London Regiment (V.F.)

Owing to increase in recruiting for the ranks, and to the fact that several officers have recently taken commissions in the Regular Army, there are a few vacancies for officers in an East End Battalion. Any members of the Society who would like further information are invited to communicate with the Secretary at once. Exceedingly important and interesting work is being undertaken by this Battalion on the defences of London and in other directions, and a special point of interest to members is that the professions of architecture and surveying are well represented in the commissioned ranks of this battalion.

Architects and National Service.

In reference to the appeal recently issued through the Press to architects who sign the National Service Form N.S.V. 1, the Architects' War Committee understands that the forms filled in by professional men who make their status clear under the heading "(*e*) Occupation" upon the form, are referred to a special branch of the Service with its headquarters in London and branches in the provinces. In the case of such professional volunteers, unless they specially state under heading "(*k*)" that they are willing to do other than professional work they will not be liable to take up manual labour or other services of a non-professional character. Should any demand of such a nature be made in error, the volunteer is at liberty to require that his form be referred to the nearest Professional Classes Branch office, where the mistake would be rectified.

Concreted Coal.

Mr. Lovell's paper, read before the Society on June 7th and published in this issue, secured very wide publicity in the newspaper and technical Press. Notices and reports appeared in the following publications, amongst others:—

THE ARCHITECT, THE BUILDING NEWS, THE BUILDER, THE SURVEYOR, THE TIMES, GLOBE, TELEGRAPH, MORNING POST, DAILY NEWS, DAILY CHRONICLE, ELECTRICAL TIMES, YORKSHIRE OBSERVER, NEWCASTLE DAILY CHRONICLE, YORKSHIRE POST, NORTH MAIL, SCOTSMAN, DAILY GRAPHIC, THE STAR, EVENING NEWS, EVENING STANDARD, WESTERN MAIL, IRON AND COAL TRADES REVIEW, FINANCIAL NEWS, NEWCASTLE DAILY JOURNAL, COLLIERY GUARDIAN, WESTERN MORNING NEWS, WESTERN DAILY PRESS, BIRMINGHAM GAZETTE, THE BRITISH CLAYWORKER, THE GAS WORLD, THE ENGINEER, THE PRACTICAL ENGINEER, THE ELECTRICIAN, ELECTRICAL INDUSTRIES, GAS JOURNAL, LONDON OPINION, EASTBOURNE CHRONICLE, BRADFORD DAILY ARGUS, KEIGHLEY NEWS, NORTH EASTERN DAILY GAZETTE, NOTTINGHAM EVENING POST, ETC.

As a result, applications for further information have been received from all parts of the kingdom, including enquiries from the Department of Scientific and Industrial Research, various testing laboratories, scientific and industrial bodies, medical men, and others interested in various aspects of the discovery and its application to present requirements.

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The Society is not as a body responsible for the opinions expressed by individual authors and speakers.

Professional Organisation of Architects.

ARCHITECTURE is a profession which has gradually withdrawn itself from all pecuniary responsibility for the business enterprise of erecting buildings, and has taken up the position of supplying—either for a fee or, (in a minority of cases, for a salary)—nothing but advice and plans, which are carried out under the architect's supervision, either by a building contractor, or by the "Works Department" of a corporate body, or a landed proprietor. The Architectural Profession, now about 12,000 strong in the United Kingdom, is distinguished from the engineering and some other vocations by its near approach to unity of professional organisation, there being only one main society, the Royal Institute of British Architects, with allied local bodies, together with a smaller and newer second organisation, the Society of Architects, aiming specially at statutory registration.

The architects seem to have started professional organisation of the social club type in 1791, a few years later than the engineers. They did not organise themselves into a permanent Institute until 1834, and even then there seems to have been no thought of establishing a large or far-reaching organisation, or, indeed, a Professional Association at all. The members, it has been said, "were selected at first for their respectability and not necessarily for their talent. . . . It was . . . considered desirable by its founders that none should join its ranks who were not gentlemen by education and social status." What they sought was not any widely extended membership, still less the regulation throughout the whole kingdom of what was already a straggling profession, but the formation of a "subject association," for the development of architecture, largely by bringing together, in pleasant social intercourse, a few wealthy amateurs and its more successful votaries; especially such as were "free from those complicating relations with trade which . . . prevented that implicit confidence on the part of the public which should enable a client to regard his architect not only as his agent, but also as his friend and adviser," "the receipt of acceptance of any pecuniary consideration or emoluments from builders or other tradesmen"; or having any "interest or participation in any trade contract or materials supplied at any building"; or any other conduct "derogatory to the character of a gentleman in the practice of the profession." The function of the architect was not regarded as that of directing and supervising the erection of all the buildings of his country, whatever they were; but only the designing and planning of such among them as were intended or desired to be beautiful. Thus architects, it was said, were, or should be, essentially artists, not to be organised as if they were Civil Engineers, or professionally instructed like Surveyors.

We need not trace the slow development of the Royal Institute of British Architects from a mere "subject association," participated in by amateurs, and presided over by noble or wealthy patrons, into an association of professionals, concerned with the maintenance of their own status and remuneration and aiming at the collective regulation of professional conduct. Already in 1841 we see the Institute struggling to revise the conditions under which public authorities obtained competitive plans from rival architects. In 1855, when a new Metropolitan Building Act was passed, the Government entrusted to the Institute, as being the only available professional body, the duty of conducting the technical examination of architects who wished to obtain "certificates of competency" to hold the office of "building policeman" or Public Inspector of Building Plans in London, misleadingly styled that of District Surveyor, or, as various Local Acts put it, Building Surveyor. From 1859 onward, after the death of Earl de Grey, the first President, the Institute gradually eliminated the amateur element and became steadily more and more a professional society.

The constitution of the Institute, which includes Honorary Fellows, Fellows, Associates, and Licentiates, affords an example of an ingenuous combination of a centralised society and a federal body, uniting over thirty local organisations in the different parts of the British Empire. It is governed by a Council elected annually, which may consist of as many as forty-three members of eight different kinds. Besides a President, two Past Presidents, four Vice-Presidents, and an Honorary Secretary, there are eighteen Fellows and six Associates, together with the Presidents (being Fellows) of the largest three allied local societies, and of not more than six others of these societies in a certain rotation, as well as one Fellow or Associate, chosen by the closely-allied educational society called the Architectural Association. The representatives of the Fellows and Associates are (since 1894) elected by postal ballot, the voting papers being issued and returned through the post. The local associations, of which there are about twenty in the United Kingdom, together with about a dozen in other parts of the British Empire, are practically autonomous bodies having their own membership, which is only partly combined with membership of the Institute.

The transformation of the Royal Institute of British Architects into what is essentially a professional association, dominating the whole profession—which has been compleetd only during the last couple of decades—was accomplished in the midst of two great controversies, one concerned with the provision of systematic education for architects and the reconstitution of the Institute on an examination basis, and the other with the agitation for an authoritative public register of authorised and qualified practitioners.

The provision of any systematic professional education for architects was long resented and resisted by those who claimed that the architect was essentially an artist, and that "art" could neither be taught by lectures nor made the subject of even qualifying examinations. To get over these objections, all educational work, apart from the gradual accumulation of an excellent professional library and the grant of a few travelling scholarships, was undertaken by the Architectural Association, which, though formally a separate organisation, has always been composed of and managed by Fellows and Associates of the Institute. Towards the end of the nineteenth century, however, it had become apparent, even to the most artistic of architects, that the system of apprenticeship afforded usually no sufficient instruction in the technique of building, or even in design, to the majority of aspirants to the profession; and resort to the growing Schools of Architecture in connection with the Universities became more general. Even greater resentment and resistance was maintained against the proposal to require from all future Associates and Fellows the passing of a qualifying examination. The experience of the other professions, both old and new, gradually made itself felt; and examinations were instituted for admission to the Associateship (in 1882) and to the Fellowship (in 1909). The late date at which this policy was adopted explains how it is that a large number of the existing Associates, and a still larger proportion of the existing Fellows of the Institute, have come in without examination.

Of greater general interest is the controversy over the registration of the profession, which is still undecided. As in the Medical Profession prior to 1858, and in the Engineering Profession down to this day, the leading architects, especially those in London, mostly see no advantage in any statutory registration, which would necessarily bring on a level with themselves the common ruck of practitioners and would in no way enhance their own position. On the other hand, the young and struggling practitioners, especially those in the provinces, see the amount of work for the architect lessened by builders supplying their own designs, by estate agents who take the plans for cottages and farm buildings from common text-books, by the salaried staffs of minor Local Authorities confident that they can put up office buildings without professional aid—to say nothing of the encroachments of the qualified engineers and surveyors not always limiting themselves to their own specialities. As the Institute, under the dominance of the more successful London architects, failed at first to take up the question of registration (and has, indeed, continued lukewarm and divided in its adherence), a separate organisation—the Society of Architects—was formed in 1884 having for its main object the promotion of Statutory Registration. Though this society has, even now, grown only to 1,185 members, it has demonstrated, by successive pollings of all the known members of the profession in practice in the United Kingdom, that a large numerical majority are in favour of registration. In the course of the last quarter of a century numerous Bills have been introduced into Parliament for the Registration of Architects, but owing largely to the attitude of the Institute none of them has come near passing into law. The opinion of the Associates and Fellows of the Institute on the subject is divided, and its corporate action has latterly been vacillating and confused. Attempts at compromise on the basis of the fusion of the two organisations and an attempt to get recognition by Bill or Charter for a Register of their common membership have so far not been successful.

The architects find themselves, in this desire for registration of the profession, faced by great difficulties. The members of the Institute of Civil Engineers and those of the Institution of County and Municipal Engineers, like those of the Surveyors' Institution and of the Quantity Surveyors' Association, vehemently object to any registration of architects which in any way impugns their own qualifications or impairs their own freedom in constructional work of any kind; and all Bills presented to Parliament have, perforce, to protect their independence and save their rights. Moreover, at present anyone may lawfully call himself an architect with or without any qualification, and it is difficult to withdraw this freedom. All that can be proposed is that no one who is not on the Register should be allowed to describe himself as a "Registered Architect." So much has been enacted in the Transvaal, in New Zealand, and in some of the Provinces of Canada, as well as in some of the States of America. This does not prohibit and is not found to prevent unqualified persons from practising as architects, sometimes under that name, sometimes under the designation of builders, contractors, engineers, building designers, or "structural experts." It cannot at present be suggested that the services of a registered architect shall be made obligatory in every building operation; and the only protection to the Register that has been proposed is that no public authority should be allowed to engage as an architect, either on salary or commission, any person not registered as such. It may, therefore, be doubted whether a Statutory Registration of Architects would be any more successful than that of Dentists has been.

The code of professional etiquette has been less extensively developed among architects than among barristers or medical practitioners, but it is growing. By constantly pegging away for three-quarters of a century the professional organisations (notably the Royal Institute of British Architects) have gone very far in the way of imposing on public authorities, if not on individual clients, conditions for competitions in the submission of plans which afford a reasonable protection to those who compete. One of these conditions is that the competing plans shall be reported on, and the adjudication therefore practically decided by a professional architect, acting as Assessor, who is often nominated for the purpose by the President of the Institute. "It is an unwritten law," now, indeed, expressly formulated, "that no assessor can by any possibility become the architect of the building over whose inception he has been the guardian, for he has naturally great opportunities of ingratiating himself into the good opinion of the Committee."

The Institute (and also the allied bodies, and the newer Society of Architects) have more or less elaborate formulated ethical codes which prohibit public advertising, enjoin the signature of plans "in an unostentatious manner," and deprecate the exhibition of the architect's name on boards or hoardings. No architect may deliberately seek to supplant another—a consideration not always extended to architects in the salaried employment of public authorities—or take part in any competition which has been publicly blacklisted in the Royal Institute of British Architects' *Journal*—members of the Institute being expelled for this professional offence. He is definitely told that he must not, whilst practising as an architect, carry on the business of Auctioneer or Estate Agent. If he takes out quantities for his buildings (for which the Quantity Surveyors' Association prescribes a uniform commission at the rate of 1½ per cent.) he should be paid directly by the client and not by or through the builder. If he has any pecuniary interest in anything proposed to be used in his building, he is required at once to inform his client of such interest. It is nowadays extremely "bad form" for an architect to solicit business or ask for work otherwise than indirectly by taking part in a competition. Finally, with regard to the scale of charges, elaborate regulations have been in force for half a century based on the general principle of 5 per cent. commission on the total outlay, this fee covering the preparation of all necessary drawings and specifications, all the correspondence, and all ordinary supervision of the work—which, though not binding on either clients or architects, are the more generally adopted throughout the profession because their effect has been to maintain rather than to reduce the scale to which individuals might have been driven. A more fundamental criticism—that remuneration by a percentage on whatever may prove to be the ultimate cost, without any fixed limit, gives the architect a direct pecuniary interest in extravagance in building, in the multiplication of extras, and even in the builder's overcharges; and that, at any rate, it discourages too much toilsome zeal in discovering the points at which the builder's inferior execution calls for a cutting down of his charges—seems to have been so far ignored by the Professional Associations.—By SIDNEY WEBB, LL.D., in *The New Statesman*.

Proceedings.

An Ordinary Meeting of The Society of Architects was held at 28, Bedford Square, London, W.C., on Thursday, July 26th, 1917, at 6 30 p.m.

The PRESIDENT (Mr. E. J. Sadgrove, F.R.I.B.A.) having taken the Chair, the minutes of the previous meeting, as printed in the *Journal*, were taken as read, and were confirmed and signed.

One nomination for membership was announced.

A ballot took place for the election of the following candidates for membership, and was declared to be unanimously in their favour.

JACKSON, GORDON WALLETT (Captain, Gordon Highlanders), Talbot Hill, Bournemouth.

JARVIS, WILLIAM HERBERT, 35, Pier Road, Erith.

KESTEVEN, LEOFRIC, Kuala Lampur, Fed. Malay States.

MARSHALL, JAMES ERNEST, The Laurels, Cross Lane, Grappenhall, Cheshire.

POYNTER, AMBROSE, F.R .I.B.A. (Lieut., R.N.V.R.), 8, Grafton Street, Old Bond Street, W.

Mr. R. GOULBURN LOVELL, A.R.I.B.A. (Member), then read a paper on "Coal Concreted from Dusts and Ashes," in continuation of a paper on the same subject read by him before the Society on June 7th, 1917.

A discussion followed, in which the following took part:—The PRESIDENT, Mr. E. J. Sadgrove, F.R.I.B.A.; Mr. C. LLOYD JONES, A.M.I.E.E., M.I.M.E., Principal of the West Ham Testing Laboratory; Mr. P. R. BARRETT, Burton-upon-Trent; Mr. W. E. FARENDEN; Mr. FRANK P. HAILY; and Mr. A. O. GREGSTEN.

Mr. R. GOULBURN LOVELL, who was accorded a very hearty vote of thanks, dealt with questions raised and demonstrated the method of making the fuel.

The proceedings then terminated.

Coal Concreted from Dusts or Ashes.

(*Second paper.*)

By R. Goulburn Lovell, A.R.I.B.A., M.S.A.

The President (Mr. E. J. Sadgrove, F.R.I.B.A.), in introducing the subject, said that when the suggestion was made to him by Mr. Lovell that a second paper and demonstration in relation to producing fuel from coal dust and ashes should be given at The Society of Architects' premises, he took upon himself the responsibility, as President, of giving assent. He was prompted to take that step because, assuming the process developed along the lines foreshadowed by the inventors, it became in the speaker's opinion a subject of considerable national importance which must take effect in several directions. It would help to shorten the war and relieve distress, and would assist in winning and maintaining the nation's commercial supremacy after the war.

On this assumption it concerned architects by opening up an additional field of labour for them. The calorific values of suitable aggregates throughout the country would vary, and although a previously ascertained formula for manufacture might be available, the aggregates might from time to time differ, and it would be conceivably advantageous to have qualified district supervisors appointed by the licensors, who would be able to determine any variation of formula on the spot, and thereby avoid any break in continuity of production.

The technical training of an Architect and his knowledge of concreting principles would peculiarly fit him for a supervisory position of this character, and having regard to the fact that large numbers of the Architectural profession would be demobilised at the close of the war, many of whom would find their practices gone, this invention would seem to provide a legitimate and useful field of employment for some part of their time.

In his Presidential Address last year he had made a distinct appeal to Architects temporarily to divert their talents into other channels for the good of the country. Mr. Lovell is a member of the Society, and his invention was in a sense a response to that appeal. That was a further reason why the Society should give Mr. Lovell the accommodation of its premises for demonstration purposes.

The first demonstration and paper by Mr. Lovell on this subject provoked not only the lively interest of the audience, but also widespread interest throughout the country, as a result of the very many Press reports and editorials and a large number of letters of inquiry for further details were received from men of science, controllers of large industries, public and Government officials, and others.

There were several scientific and technical bodies in this country of high standing who might well think that a subject of this character would be more suitable for them to handle and who at first sight might fail to see the connecting link between Coal and Architecture. He trusted that the foregoing explanatory remarks might be a sufficient justification for his personal action in deciding that under the circumstances the Society was in no sense departing from tradition, and that their principal aim in these trying times should be to do useful work for the benefit of the community.

Coal Concreted from Dusts and Ashes.

Read before the Society on July 26th, 1917, in amplification of the first paper on the same subject given by Mr. R. Goulburn Lovell, A.R.I.B.A. (Member), on June 7th and published in the *Journal* for July, 1917.

The Coal Controller, in describing the basis of his scheme for coal transport, has said that the first main principle is: "The consumption of coal should take place as near the producing point as possible."

If a fuel can be concreted from any waste of calorific value in the localities where they exist, it is clear that we shall be assisting the country by the reduction of coal transport and by the utilisation of waste. The transport thus saved would be available for our Allies, and the waste thus utilised would be to the advantage of ourselves.

We hope to prove that this is possible. I am permitted by the President of the Society of Architects to comply with the suggestions made at the last meeting: That the process of manufacture should be demonstrated, and that the analyses of the component parts and the resultant fuel should be shown.

My colleague, Mr. C. M. Hughes, and I are anxious to explain all that we can, and to submit the results of our work to the same criticism as before. We do not claim that our process increases the total thermal value of the aggregates, but we do say that there are many so-called waste materials which may be converted by this simple process into a fuel valuable for many purposes. By its means a British thermal unit costs less than that obtained by means of Nature's coal. This is the point that must appeal most strongly to the commercial mind.

As explained last month, there are three methods of making the fuel, which may be called *A*, *B*, and *C*. These three methods will be demonstrated, simple domestic utensils being employed. It will thus be possible for manufacturers to judge the class of plant which exists all over the country, and which can be used for immediately putting into operation the manufacture of this fuel for use during the winter months.

A and *B* may be termed dry processes. In this case we take as aggregates Ashes and Coal-dust. The familiar cinder-sifter first plays its part by sifting the fine dust which is of little or no value. The coarse aggregate is therefore composed of all between $\frac{1}{4}$ and $\frac{1}{8}$ mesh. This is dried, if you like, in the domestic frying-pan; it is then sprinkled with a special sugar-waste solution and again dried. The fine aggregate is taken from the coal-cellar dust, only that which passes $\frac{1}{4}$-in. mesh being used. These two bases should be intimately mixed with the matrix or binder. For this purpose I employ an old butter churn, cake-mixer, or other suitable utensil, failing which the whole mixture can be well shaken or mixed together by hand.

Up to this point A process and B process are exactly the same. *Process A* is employed wherever the sun has much value, or where heating-chambers are available. The mixed aggregates and binder have in some cases a small quantity of creosote oil added, placed into moulds, and allowed to concrete, the time, of course, varying with the amount of heat available. The fuel, when cold, is emptied out of the moulds, broken up, and is hardened by exposure to the atmosphere.

With *Process B,* the small quantity of creosote oil, if used, is placed in a boiler or an iron saucepan, the mixture of bases and matrix is added and placed upon a fire and stirred until a temperature of about 120°F. is obtained, when the whole is emptied into any mould, such as an old pail or bath. In a short time it is cold, and is emptied out, broken up, and allowed to harden.

Process C is a wet process in which there is no need to dry the aggregates. They are mixed as before, but with a different matrix mixture; the creosote oil, if used, is added and well mixed, the whole is then moistened with the solution until a consistency of mortar or concrete is obtained. It is then emptied into shallow moulds, or between sheathing boards, and dried by exposure, but with protection from the wet.

In all three processes the character of the matrices varies with the character of the aggregates, and the different aggregates have to be treated in different methods. It is usually found that in most cases the smoke of the resultant fuel can be diminished by an increase of the remaining ashes; in the case of furnace fuels the clinkering can by this means be diminished. As will have been observed, this method of concreting fuel dispenses with any kind of pressure beyond a slight tamping into the moulds.

Capable men are required to control the manufacture in order to standardise, as far as possible, the qualities of the various fuels.

Process A is more particularly suited to those climates favoured with a succession of sunshine, or it is equally well suited to those industrial concerns having ovens or heating-chambers where the moulds and their contents could remain for twenty minutes or half an hour. For low-grade cokes, coals, or bar ashes Process A is the best method.

Process B is suited for any form of rotary asphalte plant, either fixed or movable. I understand that many road construction firms have plenty of these portable heaters, which are possibly unemployed owing to the war. These could be taken to any dumps of coal slack, coke dust, or cinders, and very quickly transform them into a good fuel. Even after the war it is conceivable that these portable machines could be better employed in this manner than in road making. Our researches have proved that a certain blending of calcareous and carbonaceous matters go to form a hard road mastic which may be termed malleable. Road engineers will understand the full significance of this, and I shall probably have more to say on this subject later on.

For all materials high in carbon but low in volatile matter, Process B is the best method.

Process C is the cottager's process of producing coal in his own back yard. Of course, it would be better for a community to send its ashes and dusts to a central depot, and there have it done under proper supervision, but there is nothing to prevent an isolated individual or firm from utilising their waste materials by this process. The ordinary form of concrete-mixer could be taken to any dumps of waste material in the same way as the ordinary asphalte-mixer can be employed as before described.

For high-grade cokes, high-grade bituminous coals, or a mixture of the latter with ashes, peat, sawdust, etc., Process C is the best method.

Having demonstrated by simple appliances the different processes of manufacture, I have now to submit a tabulated statement of the analyses of seven different types of fuel made under the three processes, together with the calorific values of their component parts. The services of the West Ham Testing Laboratory have been employed in this connection, and the thermal values have all been determined by the Mahler-bomb Calormeter.

Here follows tabulated statement :—

TABULATED ANALYSES.

NAME.	No.	Volatile Matter.	Coke.	Ash.	Fixed Carbon.	B.T.U.'s of Bases.	B.T.U.'s of Component Parts.	Percentage of Raw Material as Finished Fuel	B.T.U.'s of Resultant Fuel.
Anthracite Dust ...	64 An.B.	13.26	84 92	12.16	72.76	—	12.775	91.38	12.570
,, ,, **Bases**	,,	**5.78**	**91.77**	**6.42**	**85.35**	**13.660**	—	—	—
,, ,, ...	73 An.C.	13.57	84.38	21.52	62.86	—	12.027	99 02	11.870
,, ,, **Bases**	,,	**5.45**	**91.63**	**6.20**	**85.43**	**13.690**	—	—	—
Anthracite and Peat ...	68 An.P.B.	23.82	74.04	20.76	53.28	—	8.272	92.80	8.150
,, ,, **Bases**	,,	**17.34**	**76.57**	**15.22**	**61.35**	**7,650**	—	—	—
,, ,, ...	69 An.P.C.	22. 7	75.39	22.98	52.41	—	8.280	96.55	8.170
,, ,, **Bases**	,,	**17.41**	**76.71**	**15.31**	**61.40**	**7.830**	—	—	—
Ashes and Peat	66 A.P.B.	21.16	77.10	51.42	25.68	—	6.786	98.22	6.690
,, ,, **Bases**	,,	**12.41**	**85.32**	**56.18**	**29.14**	**5.340**	—	—	—
,, ,, ...	74 A.P.C.	30.23	67.20	42.38	24.82	—	6.520	98.25	6.435
,, ,, **Bases**	,,	**16.29**	**81.21**	**48.78**	**32.43**	**6.360**	—	—	—
Ashes and Coal Dust ...	62 Al.B.	15.44	83.95	27.57	56.38	—	9.041	98.05	8.910
,, ,, **Bases**	,,	**5.17**	**92.78**	**35 96**	**56.82**	**8.890**	—	—	—
,, ,, ...	72 Al.C.	16.86	82.13	38.64	43.49	—	8 094	97.14	7.980
,, ,, **Bases**	,,	**5.15**	**92 75**	**56.20**	**56.55**	**8.870**	—	—	—
Kent Coal Dust ...	59 S.B.	29.32	69.54	21.30	48.24	—	11.422	98.35	11.250
,, ,, **Bases**	,,	**25.22**	**73.41**	**20.20**	**53.21**	**11.870**	—	—	—
,, ,, ...	58 S.C.	30.83	67.53	24.86	42.67	—	10.375	99.58	10.230
,, ,, **Bases**	,,	**25.22**	**73.41**	**20.20**	**53.21**	**11.870**	—	—	—
Kent Coal Dust and Washings	60 S.B	18.26	80.96	59.14	21.82	—	5.669	98.62	5.580
,, ,, **Bases**	,,	**11 52**	**87.64**	**65.68**	**21.96**	**4.440**	—	—	—
,, ,, ...	61 S.C.	19.98	79.15	57.72	21.53	—	4.400	93.33	4.980
,, ,, **Bases**	,,	**11.62**	**87.49**	**64.90**	**22.59**	**4.460**	—	—	—
London Coke	57 L.B.	21.40	77.69	23.96	53.73	—	11.261	96.10	11.110
,, ,, **Bases**	,,	**8.20**	**89.95**	**17.94**	**72.01**	**11.620**	—	—	—
,, ,, ...	71 L.C.	15.43	83.10	30.29	52.81	—	10.107	98.86	9.980
,, ,, **Bases**	,,	**8.12**	**89.99**	**17,88**	**72.11**	**11.640**	—	—	—

Note.—The percentage of Raw Material in the Resultant Fuel should be observed.

In addition to the above sample the following are also shown :—

Messrs. Selfridge's Bar-Ash and Coal Dust.
Coventry Coal Slack.
Newcastle Coke Dust.
Shoreham Pan-Ash Coke and Sawdust.
Killarney Sawdust.
St. Helen's Coal Slack.
Portland Cement Co.'s Bar Ash and Coal Dust.
Hadley Coke Dust.
Carlton Hotel Bar-Ash and Coal Dust.
Western Mail Coal Slack.

It will be observed that these examples extend from Peat to Anthracite. Samples of materials from which they have been produced and the samples of the resultant fuel are shown in each case; they will light from the sticks, incandesce, and flare. This is perhaps more remarkable in the case of anthracite dust. There are many collieries where fine coals are produced to-day in abnormal quantities, due to unusual frialibity, as, for instance, the Kent coal shown in the tabulated statement. I understand the percentage of slack is over 70 per cent. of the total output. It is here demonstrated that by our process fuel can be economically made equal in value to the large coal worked in the same seams. By utilising this mine to its full extent, the Coal Controller's problem of transport in Kent and Sussex would be very much diminished.

We are only now awakening to the enormous waste that has been taking place in this country in the consumption of coal. The valuable chemical by-products of which have been lost beyond recovery. Mr. Madden, the Gas Engineer of Cardiff, has stated in an address: "The system we employ to burn this valuable gift of Nature will be accounted to us as a barbarism by future generations when the coal supply of the world is running low in the cellars of the earth."

The conservation of our wonderful coalfields is a duty imposed upon us. Our industrial supremacy in the past had been founded greatly upon our riches in this respect; therefore, in the present time of stress it behoves us to adopt every effort to extract every benefit we can from every coal mine in the country. Professor Franke, in his recent book, has stated that the production in one year in Great Britain was 250 million tons of bituminous coal; the waste slack utilised only produced in briquettes 1½ *million tons*. In Germany, during the same period, the production was 183 million tons of bituminous and brown coals; the slack utilised produced in briquettes and pressed blocks 14½ *million tons*.

The briquetting method of utilising coal slack requires a pressure of 200-1,500 atmospheres, costly machinery and plant are constructed, and the slack has to be transported to the briquetting factories. The concreting process, on the contrary, enables the simple machinery and plant to be taken to the dumps of slack, thus saving at least one lot of handling and transportation. The concreted fuel is manufactured *in situ*. Further, it is submitted a better fuel is produced—one which lights from the sticks, incandesces and flares. The rough, fractured surfaces not only help in the ignition, but having more the appearance of Nature's coal they help in stimulating the confidence of the purchaser.

It is even suggested that on board ship the bar-ashes from the furnaces and the coal dust from the bunkers can be easily concreted into a fuel with a calorific value of about 11,000 B.T.U.'s.

The dumping of inferior grades of coal or other materials cannot strictly be regarded as waste up to the present, because never before has it been demonstrated that these materials can be employed usefully. Now that this process has been given every publicity, to leave these materials lying as rubbish when every effort is being strained to develop the resources of the country would be wilful waste.

It may appear rank heresy to the Medical Officers of Health, but I appeal to the Local Government Board to order the closing down of the refuse destructors in many localities. The house refuse could quite well be collected in two different receptacles. The vegetable refuse during the war could be dumped, deodorised and afterwards used as a fertilising agent; the cinders and ashes, as before explained, could be made into a decent fuel.

In my own town of Eastbourne, a few months back great dumps of cinders existed which produce a concreted fuel of 7-8,000 B.T.U.'s. These are now being consumed, together with quantities of Welsh coal, in order to destroy the summer vegetable refuse. The transportation of this coal can be avoided, and the vegetable refuse after the war can be used to help improve the land. It is true that a certain amount of power is gained by destructor furnaces, but the amount of fuel required for this alone is nothing compared to the great consumption of cinders and coal required to destroy the house refuse.

It is said that one of the wonderful ways to win the war is—To help to save England's coal. Every individual can assist. It is shocking to walk through the City of London early any morning and to see outside almost every door buckets of ashes awaiting their removal to the destructor. Officialdom is, of course, very busy and overworked just now; lack of staff and increase of work easily accounts for that.

It is individual efforts that have built up the British race. We thrive best on a minimum Government control. Spontaneous efforts of all classes are to-day accounting more for our march to victory than the efforts of the best bureaucratic organisation in the world. The V.A.D.'s, the canteen workers, the munition workers, the allotment workers, the Women's Land Army, and, above all, our glorious Volunteer Army will bring us an assured victory. Therefore, we appeal to the individual to take part in a further effort to help to win the war—by reducing the transport of coal and by the utilisation of waste.

I shall fall out with nobody; the Colliery Proprietor will have at his disposal a process of reconstructing coal cheaper than any method at present in vogue; the Industrial User will have available a fuel which can be made in a form that can be stored in the minimum of space and without danger of spontaneous combustion; and the Householder will be able to clear his cellar to the last particle of dust and his grate to the last particle of cinders, and so produce his own home-made coal.

The town refuse yard, the gas works, the brick and tile works, and others have thousands of tons of potential coal scattered up and down the land. The individual and the firm can help the country and themselves by tackling this question now, and so have plenty of decent fuel ready on the spots which are now only heaps of Dusts and Ashes.

Among others present at the discussion were the following: Sir Henry Tanner, C.B., F.R.I.B.A.; Mr. C. Lloyd-Jones, A.M.I.E.E., M.I.M.E.; Mr. H. V. Lanchester, F.R.I.B.A.; Mr. Robert Curry (*Western Mail*), Mr. A. E. Pater and Mr. A. O. Gregsten (Hampstead Garden Suburb), Mr. H. J. Johnston and Mr. P. R. Barrett (Leeds Fireclay Co.), Mr. A. Chubb (Shoreham-on-Sea), Mr. Jno. J. Bate (Greengate Brick and Tile Co.), Mr. A. E. Ritchie (Kent Collieries), Mr. Percy Varley (City of London Real Property Co.), Mr. Chas. J. H. McRea (Messrs. J. H. Beattie and Co.), Mr. R. B. Barratt (Burton-on-Trent), Mr. Frank P. Hailey (Birmingham), Mr. E. C. P. Monson, F.R.I.B.A., Mr. T. K. Richardson (Assistant Coal Controller), Mr. A. R. Jemmett, F.R.I.B.A., and Mr. Percy B. Tubbs, F.R.I.B.A.

Mr. C. LLOYD JONES, A.M.I.E.E., M.I.M.E., Principal of West Ham Testing Laboratory, said he was afraid that owing to pressure of business and the large number of analyses he had been called upon to make, he had handicapped Mr. Lovell to a very great extent in the preparation of the table in the paper, which was, in consequence, in rather a curtailed form. If he had Mr. Lovell's permission to make use of the whole of the results he could give some further information which would be interesting. For instance, it was important to have some idea of the ratio of the various constituents of the product, and he would take example 57 L.B., the last one shown in the table, which was London coke. He examined the matrices, the bases, and the liquids which were used individually, and found that the matrix in this particular case represented 24.51 per cent. of the raw ingredients used for making the fuel. That matrix had a calorific value of 7,985 B.Th.U. per pound. The base itself as used showed 11,620 B.Th.U. per pound, which represented 64.71 per cent. of the constituents of the raw mixture. In addition, there was added tar, and that had a thermal value of 16,558 B.Th.U., and represented 10.78 per cent. of the raw mixture. It was from that information that the thermal value of the component parts given in the paper for this particular fuel of 11,261 B.Th.U. was calculated. During the process of manufacture there was a loss of moisture and the resultant fuel was only 96.1 per cent. of the raw ingredients, so that the B.Th.U. of the resultant fuel was only 11,110. It would be noticed that there had been an apparent appreciation of the thermal value of the base after manufacture, but that was only in those instances in which the thermal value of the base was lower than the thermal value of the matrix which was added to it. He also found what was apparently in the first instance a discrepancy. He got the volatile matter, coke, and ash, and could not quite understand why the thermal value of the matrix was so very low. Then it was discovered that a great portion of the matrix was soluble in hydrochloric acid, indicating that there were carbonates present to some considerable extent, and these carbonates constituted almost half of the matrix itself. Naturally, when that matrix was burned to an absolute ash, there was a portion of Co_2 which went away unnecessarily in the volatile matter. On calcining at red heat it was cut off as incombustible gas, and would have a depreciating effect on the resultant thermal efficiency of the fuel which the tests in every instance showed. It ought to be made quite clear that the percentage of the raw material shown in the table was a very crude figure, because Mr. Lovell would have found it almost impossible to weigh so accurately as to give something which was of laboratory exactitude. There was the case of 61 S.C., in which not only was oil used as an ingredient, but also another solution. That other solution contained 95 per cent. of water, and as it was present as 11.59 per cent. of the total raw materials, the figures showed that more was got out of the fuel than Mr. Lovell said he had put in. Therefore, he took it there must be some slight loss in the actual manufacture of the fuel, which he thought was very probable. He did not know that there was much else to say with regard to the table, but there was one thing which he was sorry was not included in it, and that was some statement as to the percentage of moisture, but that was just because there was no room for it, but it was rather an important feature. In all cases the moisture in the finished product—*i.e.*, the hygroscopic moisture and not the free moisture—was lower than in the basis coal or cinders or refuse. That meant it must have been driven off by heat during the process of manufacture, and it would mean that there would be less material to transport due to that evaporation or moisture in the process of manufacture on site. There had not yet been any mechanical tests on these briquettes, but he believed there were in process of manufacture a number of specially-shaped briquettes made in the same form as those employed for testing cement. He would like to have made some form of compression test instead of tensile tests, but great difficulty had been found in devising any accurate or standard method of doing that, and therefore it had been decided to rely on tensile strength alone to indicate the mechanical properties.

Mr. P. R. BARRETT (Burton-upon-Trent) asked what would be the approximate cost of a fuel such as the one Mr. Lovell had made at the meeting.

Mr. LOVELL said he could only say what would be the approximate cost of the matrix which changed with every type of fuel.

Mr. BARRETT said the question of cost was the value of the resultant fuel.

Mr. LOVELL said that for general rough purposes it could be taken at 5s. to 6s. per ton.

Mr. W. E. FARENDEN, referring to the statement in the paper as to the use of bar ash from furnaces and dust in bunkers on board ship, asked if any tests had been made on Indian or Japanese coal, and, if so, what the B.Th.Us. were. Also, what the effect on the bars was; was there any likelihood of it clinging to the bars? If that were the case, it might be very difficult to get it off, and it would also reduce the air spaces which were necessary to combustion.

Mr. LOVELL replied that in a short time he would be able to answer that question. It was only on the previous day that officials from the P. and O. Steamship Company were discussing the matter, and tests were to be made on Bombay coal and Japanese coal.

At this point the members and others present examined the exhibits of concreted coal which were in the room.

Mr. LOVELL, answering a question as to whether the fuel produced by his process was a free burning coal, said the result depended entirely upon the matrix. The matrices were modified in accordance to the purpose to which the coal was to be put. If it were required for household use a good free-burning coal would be produced.

Mr. FRANK P. HAILEY said he had gone rather closely into this question. He was connected with an asphalte firm in Birmingham where they had a large number of boilers for turning out mastic asphalte, and they had put the process on a commercial basis by using up slack dust. By the following day they would have made their first quantity of fuel. It had been undertaken not so much from the financial aspect as from the national aspect. They had thought over the matter, and had come to the conclusion that if they could make use of this dust it would be not only to their own advantage, but to the advantage especially of the poorer people in the neighbourhood he came from.

Mr. A. O. GREGSTEN asked if local authorities would accept this material for road making.

Mr. LOVELL said he thought Mr. Hailey could satisfy him on that point, as his firm had just completed some such work for the Birmingham Corporation.

Mr. GREGSTEN remarked that he thought it had been said that the cost of the matrix was about 5s. to 6s. per ton of coal.

Mr. LOVELL: Yes.

Mr. P. R. BARRETT asked if coke dust would cost the same.

Mr. LOVELL: The price of coke dust appears to vary from 1s. per ton to 6s. or 7s. per ton. Continuing, he said it must be remembered that this fuel was very much lighter than coal, and therefore it would have to be sold on the same basis as coke—viz., by the sack of three bushels, which was equivalent to a coal sack of 2 cwt. It could not be sold by weight, but by measure.

A hearty vote of thanks was accorded Mr. Lovell, and the meeting terminated.

Members, Graduates and Students of The Society of Architects serving in H.M. Forces.

Every endeavour has been made to compile and keep an accurate record. The Secretary will be glad to receive notification of any additions or revisions.

Members.

Adams, W. H.	Royal Engineers.
Anderson, H. C.	Coy. Q.-M.-Sergt. Army Service Corps.
Andrew, B. C.	Lieut. Royal Garrison Artillery.
Ash, Sidney	O.T.C.
Ashworth, S. B.	2nd Lieut. Royal Garrison Artillery.
Baker, C. H.	Lieut. Royal Engineers.
Barker, F. W. C.	2nd Lieut. Royal Garrison Artillery.
Barker, T. C.	5th Yorkshire.
Barks, E. E.	Royal Engineers.
Bartlett, P. J.	Anti-Aircraft Corps.
Beazley, T. F.	2nd Lieut. King's Own Royal Lancashire Regiment.
Bell, M. J.	2nd Lieut. Royal West Surrey Regiment.
Benwell, W. R.	Royal Flying Corps.
Bevir, John	Royal Navy.
Binks, H. P.	O.T.C.
Blackman, J. W. B.	Lieut. Canadian Railway Construction Corps.
Blackmore, A. C.	2nd. Lieut Royal Flying Corps.
Bloomfield, W. S. R.	Capt. Royal Flying Corps.
Bolton, C. W. B.	Lieut. Royal Engineers.
Bowhill, F. J.	Naval Brigade.
Bray, J. S.	Lieut. R.E. Services.
Brewer, F. W.	2nd Lieut. Royal Engineers.
Bryan, G. A.	Royal Naval Air Service.
Burr, F. M.	Royal Flying Corps.
Cabuche, H. L.	Capt. 13th London Regiment.
Campkin, D. J.	28th London Regiment.
Carder, W. J. T.	Capt. Devon Regiment.
Chadwick, J.	Major Oxford and Bucks Light Infantry
Chaikin, B.	Staff Sergt. Royal Army Medical Corps
Chilton, E. A.	Royal Army Medical Corps.
Christie, J. A. C.	Captain Rhodesian Defence Force.
Clark, H. S.	Corpl. Army Service Corps.
Clark, T. W.	Royal Army Medical Corps.
Clarke, P.	Royal Engineers.
Clayton, H.	Lieut. South Notts. Hussars.
Clegg, G. B.	Royal Engineers.
Clemes, F.	Hertfordshire Yeomanry.
Coad, P. A.	Royal Naval Air Service.

Cogswell, A. E.	Lieut.-Colonel Royal Field Artillery.
Cornelius, A. J.	Royal Engineers.
Cornford, F. J.	Artists' Rifles O.T.C.
Cotterell, E. L.	Royal Engineers.
Cowley, H. R.	2nd Lieut. Royal Engineers.
Cox, A. S.	Lieut. Royal Flying Corps.
Crickmay, G. H.	Lieut. Royal Engineers.
Cromie, R.	Hon. Lieut. R.E. Services.
Crosby, J. P.	Army Service Corps.
Curram, E. S.	Royal Engineers.
Dartnall, J. A.	2nd Lieut. Royal Engineers.
Davidson, T. G.	Royal Fusiliers.
Davies, A. H.	Major Royal Field Artillery.
Davies, E. B.	Lieut. Royal Engineers.
Davies, W. G.	Royal Engineers.
Davis, H. S....	Capt. Royal Engineers.
Dickinson, A. H.	2nd Lieut. Royal Engineers.
Donnelly, C. O'C....	Capt. Canadian Contingent.
Donnelly, R.	Dublin University O.T.C.
Douglas, J. Wightman	Major, D.S.O., Royal Engineers.
Dowdeswell, W.	Capt. Welsh Regiment.
Dowsett, S. C.	South African Veterinary Corps.
Easton, A.	Lieut.-Colonel East Yorks Regt. (T.F.)
Ellis, T. M.	2nd Lieut. Royal Engineers.
Ellison, A. J. T.	Army Service Corps.
English, J. W.	Royal Engineers.
Evans, G. L.	Capt. Essex Regiment.
Farrow, J. W. H.	Corporal South African Infantry.
Fincher, P. R.	Staff-Sergt. Royal Army Medical Corps.
Firth, J. P.	Capt. King's Own Yorkshire Light Infantry.
Ford, C.	Devon Regiment.
Foster, W. F.	Chief Petty Officer, Royal Naval Air Service.
Fowler, E. G.	Capt. Army Service Corps.
Fry, P. G.	Major, D.S.O., Royal Engineers.
Fyvie, J. D.	Capt., attached to Financial Staff.
Geake, H.	Royal Engineers.
Gibbs, C. L.	University of Alberta Coy.
Goulburn, H.	2nd Lieut. Royal Field Artillery (T.F.).
Greatorex, A. D.	Lieut. Royal Defence Corps.
Green, B. W.	Middlesex Hussars.
Hack, W. P.	2nd Lieut. Lincolnshire Regt.
Hadley, W. J.	Sergt. South Wales Borderers.
Hall, S. A.	Lieut. Royal Engineers.
Harbottle, E. J.	Capt. Royal Field Artillery.
Harrison, T.	O.T.C.
Haslam, J.	2nd Lieut. 28th London Regiment.

Hatchard, O. B.	Sub-Lieut. Royal Naval Air Service.
Hay, Chas.	Lieut Canadian Militia.
Haymes, R. E.	Herefordshire Regiment.
Hayward, A. B.	Lieut. Machine Gun Corps.
Hearne, Frank	
Heathcote, C. H.	Major Sherwood Foresters.
Heathcote, Edgar	Major Sherwood Foresters.
Heaton, R. A.	Manchester Regiment.
Hedley, G. M.	Lieut. Royal Engineers.
Higgins, C. J.	Colonel Royal Field Artillery.
Hill, E. F.	2nd Lieut. Berkshire Yeomanry.
Hillier, H. W.	Royal Naval Air Service.
Hitchins, W. W.	Royal Engineers.
Hoffmann, C.	Royal Engineers.
Holding, E. de Wilde	
Holmes, A. H.	Royal Engineers.
Holtom, E. G.	2nd Lieut. Lancashire Fusiliers.
Hopkins, P. A.	Major 13th London Regiment.
Horne, D. E. A.	Lieut. Royal Engineers.
Howarth, F.	Army Service Corps.
Howden, R.	Lieut. South African Engineers.
Hunter, J. D.	2nd Lieut. Royal Garrison Artillery.
Hunter, M.	Lieut.-Col. 9th Northern Home Battalion.
Hurst, G. T.	Major Natal Mounted Rifles.
Huxley, W. S.	2nd Lieut. Royal Fusiliers.
Hyde, R. R. W.	2nd Lieut. Royal Engineers.
Imrie, G. Blair	2nd Lieut. Royal Engineers.
Ingleton, D. F.	Sergt. Glamorgan Yeomanry.
Inglis, T. Stewart	Major Royal Field Artillery.
Isaac, W. J.	28th London Regiment.
Jack, G. H.	Lieut. Royal Irish Fusiliers.
Jack, Guy, W.	2nd Lieut. Royal Engineers.
Jackson, H.	Royal Engineers.
Jackson, G. W.	Capt. Gordon Highlanders.
Jane, W.	Major Royal Engineers.
Jarvis, W. H.	2nd Lieut. Royal West Surrey Regiment.
Johnson, J. G.	Lieut. Lethbridge Highlanders, Canadian Contingent.
Johnson, T. F.	Army Service Corps.
Johnson, W. H.	Royal Engineers.
Jones, E. D.	Royal Army Medical Corps.
Jones, F. H.	2nd Lieut. Royal Engineers.
Jones, Frank H.	
Jory, E. B.	Lieut. Royal Engineers.
Joslin, G. A.	2nd Lieut. Royal Field Artillery.
Keay, L. H.	Lieut. Royal Engineers.
Keighley, H. F	Army Service Corps.
Kelly, W. E.	Lieut. Royal Naval Volunteer Reserve.
King, G. G.	Royal Fusiliers.
King, W.	Royal Army Medical Corps.
Kohler, H.	

LANG, A. S.	Royal Engineers.
LAW, C. O.	Capt. Royal Engineers.
LEEST, E. M.	Capt. Devonshire Regiment.
LE GROVE, W.	2nd Lieut. Royal Engineers.
LILLIE, A. C. M.	
LING, R. B.	Lce.-Corp. Royal Army Medical Corps.
LISTER, A. H.	2nd Lieut. Royal Garrison Artillery.
LOCKTON, H. W.	2nd Lieut. Royal Engineers.
LOWBRIDGE, G. C.	2nd Lieut. Royal Engineers (T.F.).
LUND, J. E.	Royal Garrison Artillery.
LURCOCK, H. J.	West Yorkshire Regiment.

MACHATTIE, J. M.	14th London Regiment.
MAITLAND, A. G.	Lieut. Scottish Rifles (Cameronians).
MANDER, A. E.	Army Service Corps.
MANN, W. R. B.	Army Service Corps.
MATTHEWS, F. J.	
MAY, W. H.	Lieut. Royal Defence Corps.
MCCORQUODALE, G. M.	2nd Lieut. Loyal North Lancashire Regt.
MCDONALD, J. S.	Major and Adjutant Calcutta Scottish.
MCDONNELL, A. J.	Royal Army Medical Corps.
MEDCALF, T. B.	2nd Lieut. Loyal North Manchester Regt.
METTHAM, J. A.	Lieut. Royal Engineers.
MITCHELL, C. T.	South African Cyclists.
MONSON, H. C. H.	Sergt. London Rifle Brigade.
MOORE, JAMES	2nd Lieut. Royal Engineers.
MOSS, D. J.	Royal Naval Air Service
MYERS, J.	East African Mounted Rifles.

NEWCOMBE, P. C.	Capt. Durham Light Infantry.
NEWMAN, C. J.	2nd Lieut. King's Liverpool Regiment.
NEWSON C.	Royal Navy.
NEWTON, G.	2nd Lieut. Royal Engineers.
NORMAN, E. J.	Royal Engineers.

OLDFIELD, G. H. R.	2nd Lieut. Royal Engineers.
OLIVER, F. G.	2nd Lieut. Northumberland Fusiliers.
OLIVER, H.	Major Essex Regiment.
OVERBURY, T.	Lieut. Graves Registration Unit.

PACE, C. L.	12th London Regiment.
PAGE, B. C.	Major Royal Engineers.
PARKER, A. L.	2nd Lieut. Durham Light Infantry.
PARKER, A. T.	2nd Lieut. Royal Engineers (T.F.).
PASCOE, H.	York and Lancaster Regiment.
PEARSON, E. W.	Lieut. West Yorks Regiment.
PENTY, F. T.	
PERRY, R. T.	Lieut. Canadian Army Service Corps.
PICKERING, J.	Royal Engineers.
PICTON, C. J.	2nd Lieut. Welsh Regiment.
PLATTS, P. O.	2nd Lieut. South Lancashire Regiment.
POLLARD, E. A.	Major West Yorkshire Regiment (T.F.).

Poynter, Ambrose	Lieut. Royal Naval Volunteer Reserve.
Price, T. G.	Royal Flying Corps.
Proctor, E.	Lieut. Royal Engineers.
Pulford, W. J.	Lieut. Army Service Corps.
Purvis, F. J.	Lieut. Australian Contingent.
Radford, T. R.	Royal Engineers.
Randell, A. J.	Major V.D. Wiltshire Regiment.
Reynolds, L. A.	Artists' Rifles O.T.C.
Richardson, J. B.	
Richley, N.	2nd Lieut. Northumberland Fusiliers.
Ridge, T.	Lieut. Royal Engineers.
Roberts, F. A.	Lieut. Royal Flying Corps.
Roberts, G. A.	Major Australian Imperial Force.
Robertson, J. D.	Royal Engineers (T.F.).
Robinson, W. H.	Major Kent Cyclist Battalion.
Rose, E.	Corpl. South African Infantry.
Rowland, H. E.	2nd Lieut. Middlesex Regiment.
Russell, A. C.	Royal Engineers.
Russell, G. H.	London Rifle Brigade.
Rutter, C. D.	Hon. Lieut. R.E. Services.
Sample, E. F. R.	West Yorkshire Regiment.
Sargisson, W. F.	2nd Lieut. India Army Reserve of Officers (27th Light Cavalry).
Saye & Sele, the Rt. Hon. Lord	
Scott, A. I.	Coy.-Sergt.-Major Rifle Brigade.
Seels, G. M.	2nd Lieut. Royal Engineers.
Sherlock, E. D.	Royal Naval Division.
Skipper, C. F.	Hon. Capt. Canadian Army Medical Corps.
Slater, J.	East Lancashire Regiment.
Smith, I. G.	Lieut. Royal Engineers.
Solon, P. H.	2nd Lieut. Royal Engineers.
Spratt, N. C.	Capt. Royal Flying Corps.
Stewart, Alan J.	Lieut. Royal Scots
Story, P. F.	Capt. Royal Engineers.
Streatfield, G. E. S.	Capt. Royal Engineers.
Stuttle, B. W.	Royal Engineers.
Sullivan, L. S.	2nd Lieut. R.W. Surrey Regiment
Sutherland, G. A.	Lieut. Seaforth Highlanders.
Swanston, J. D.	Royal Highlanders.
Syms, R. H.	Major Royal Engineers.
Tanner, D. G.	Lieut. Royal Engineers.
Taylor, F. J.	Hon. Artillery Company.
Taylor, J. J.	Lieut. Royal Engineers.
Taylor, T. E.	Royal Flying Corps.
Thomas, R. W.	Lieut. Royal Engineers.
Thorpe, O. M.	Royal Flying Corps.
Twist, W. Norman	2nd. Lieut. Worcester Regt.
Veale, L. C.	Royal Naval Air Service.

Wenyon, G. H.	Lieut. Cameronians.
Wilkinson, S.	Royal Flying Corps.
Williams, J. M.	Army Ordnance Corps.
Wills, J. R.	
White, E. F.	Royal Army Medical Corps.
Whitwell, E.	Lieut. Royal Naval Air Service.
Wilkins, V.	2nd Lieut. Royal Engineers.
Wilkinson, H. A.	2nd Lieut. Northumberland Fusiliers.
Williams, E. J.	2nd Lieut. Leicestershire Regiment.
Williams, W. H.	Inns of Court O.T.C.
Wilson, F. C.	Capt. Royal Engineers.

Graduates.

Juniper, F.	Royal Engineers.
Langford, Bonn	Westminster Dragoons.
Rees, F. W.	2nd Lieut. Royal Engineers.
Shibley, A. R.	Middlesex Regiment.
Smith, S. R.	Royal Engineers.
Stafford, A. J.	Army Service Corps.
Stobbart, F. R.	Royal Garrison Artillery.
Tranmer, F.	Royal Engineers.

Students.

Abbott, A. L.	2nd Lieut. Royal Engineers.
Adams, R. E.	Sergt. Royal Flying Corps.
Ash, G. D.	Corporal Royal Engineers.
Baguley, H.	Army Service Corps.
Barry, D. H. H.	18th London Regiment.
Batley, J. G.	Royal Flying Corps.
Beach, T. S.	Lieut. Royal Engineers.
Bickerton, W. C.	Royal Engineers.
Bradford, S.	Inns of Court O.T.C.
Brady, A.	Royal Dublin Fusiliers.
Brewer, E. M.	Royal Garrison Artillery.
Brooke, W.	Army Service Corps.
Burden, C. E.	King's Royal Rifles.
Cable, C. J.	Royal Naval Air Service.
Cavanagh, L. F.	12th London Regiment.
Clack, J.	London Rifle Brigade.
Collins, S. H.	2nd Lieut. Yorks Regiment.
Coombs, D. W.	2nd Lieut. Royal Engineers.
Corrie, D. B.	The Buffs.
Coupland, W. V.	Army Service Corps.
Cropper, J. W.	Royal Navy.

Davies, E.	2nd Lieut. Welsh Regiment.
Dening, S. J. C.	2nd Lieut. Devon Regiment.
Dury, A. B.	London Rifle Brigade.
Evans, H. L.	Pembroke Yeomanry.
Fletcher, G.	Royal Engineers.
Fraser, Bright	Artists' Rifles, O.T.C.
Fyvie, H.	Capt. Gordon Highlanders.
George, A. S.	Corporal Army Ordnance Corps.
George, J. H.	Royal Army Medical Corps.
Gillespie, J. G.	2nd Lieut. 17th London Regiment.
Gomm, J.	16th London Regiment.
Gower, L. R.	Welsh Regiment.
Graham, H. I.	2nd Lieut. Royal Engineers.
Gray, D. R.	2nd Lieut. Worcester Regiment.
Griffiths, R. C. E.	
Griffiths, W.	Royal Engineers.
Grimmond, H. G.	Royal Engineers.
Grist, V. H.	Royal Engineers.
Haigh, W. M. N.	Lce.-Corpl. Leicester Regiment.
Hall, W.	Lieut. Duke of Cornwall's Light Infantry.
Haslam, F. C.	Uganda Volunteer Reserve.
Hayward, F. F.	Cambridgeshire Regiment.
Heaven, Frank H.	Royal Engineers (T.F.).
Holroyd, W.	Royal Field Artillery.
Holt, F.	19th King's (Liverpool) Regiment.
Howells, D. J.	Inns of Court O.T.C.
Hunt, Stanley	2nd Lieut. Durham Light Infantry.
Jeffery, C. A.	4th Devon Regiment.
Johnson, A. B.	Royal Engineers.
Jones, N. W.	Royal Engineers.
Lawton, W.	Army Service Corps.
Lock, J. M. B.	2nd Lieut. Middlesex Regiment.
Lowe, J. W.	Petty Officer, Royal Naval Volunteer Reserve.
Lyne, D. R.	2nd Lieut. Royal Engineers.
Marles, C. W.	2nd Lieut. Royal Engineers.
Marshall, S. J.	Yeomanry.
Mendham, B. J.	2nd Lieut. Royal Welsh Fusiliers (T.F.).
Millar, T.	
Millen, D.	Surrey Yeomanry.
Miller, W. A.	Royal Engineers.
Mowbray, C.	Royal Engineers.
Munckton, V. C. A.	Royal Field Artillery.
Oates, A.	Tyne Electrical Engineers.
Overy, C. F.	2nd Lieut. Royal Fusiliers.
Owens, J. P.	Corporal Northants Yeomanry.

Parkin, W G.	Royal Fusiliers.
Parr, D. J.	South African Horse.
Pickup, J.	Army Ordnance Corps.
Pinfold, S.	Royal Naval Air Service.
Priest, T. R.	Royal Naval Air Service.
Rebbeck, W. H.	Royal Engineers.
Rees, F. W.	2nd Lieut. Royal Engineers.
Richardson, R. H.	2nd Lieut. Royal Flying Corps.
Roberts, C. H.	
Ryan, B. J.	Captain Royal Engineers.
Sanders, J. E.	Lancashire Hussars.
Sayers, A. D.	East Surrey Regiment (T.F.).
Scatchard, F.	Royal Engineers.
Scott, Thos.	
Simpson, I. A.	Royal Engineers.
Smith, T. H.	Royal Engineers.
Soulby, A. C.	
Stafford, J. E.	Lieut. Durham Light Infantry.
Stewart, A. D.	Lieut. Royal Scots.
Tapping, F.	
Taylor, F. P.	2nd Lieut. Oxford and Bucks L.I.
Thomas, D. W.	Hon. Artillery Company.
Timmins, E.	Hussars.
Urwin, S. E.	Royal Army Medical Corps.
Vander Schyff, R. C.	Staff-Sergt. Union Defence Force, S.A.
Waite, C. L.	Royal Flying Corps.
Whitaker, J.	2nd Lieut. Royal Field Artillery.
Williams, P. J.	Lance-Corpl. Welsh Regiment.
Williams, W. R.	

SUMMARY.

Serving :—	
Members	240
Graduates	8
Students	95
Invalided :—	
Members	2
Students	4
Died :—	
Members	8
Students	7
Missing :—	
Students	1
Total	365

Nominations for Officers and Council, 1917-18

Any additional nominations will be included in the ballot paper to be issued on October 1st.

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Junior Vice President:
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Jackson, Chas. E.
Leslie, Col. F. S., R.E. (ret.)
Marsland, Ellis
Martin, W. J.
Moscrop-Young, F. C.
Pearson, J. Herbert.
Tucker, B. R.
Vickery, T. S.
Wallis, Thomas
Wenyon, G. H.

COUNTRY.

Beaumont, P. M., A.M.INST.C.E.
Cancellor, B. D.
Gill, Harry
Harrison, G. A.
Lovell, R. G., A.R.I.B.A.
Murgatroyd, A. J.
Ruthen, C. T.
Taylor, A. J.

Reviews.

George Edmund Street: Unpublished Notes and Reprinted Papers; with an Essay by Georgiana Goddard King. (The Hispanic Society of America, 1916.)

Street died in 1881, so that to many of us he is little else than a name; but to others who can recall his living influence he is still something more—an inspiration; and that in spite of the complete change which has come over architectural expression in the intervening years. Indefatigable worker, truly inspired as any architect of any age, a firm believer in his God and in the Christian faith, he expounded this faith in his work in the full spirit of the Gothic workers of many centuries before. Many other builders during the Gothic Revival were mere copyists of mediæval forms. Street was much more. With a richer and fuller knowledge than most, derived from conscientious study, first in England and then on the Continent, which spread over the whole of his working life, he was never definitely harnessed to his art as to an antiquarian study, but lived in it and absorbed and loved it, till it became part of his own being and he became a living and original exponent of it.

All this is emphasised, and rightly, in the Essay on his life with which this present volume opens; but its main interest lies in the reprints from his diaries, which form its bulk, and in the charming pencil sketches with which it is illustrated, produced at a speed which even the most facile of us, his unworthy successors, can only envy.

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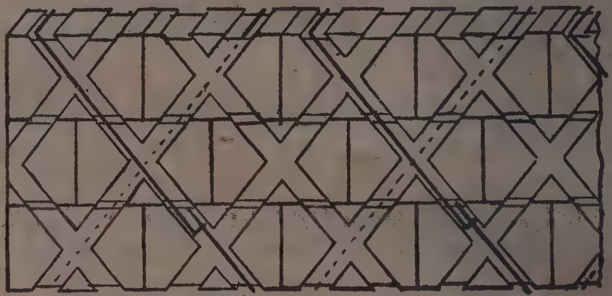

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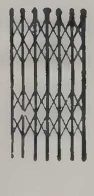

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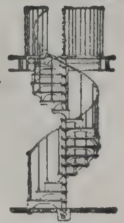

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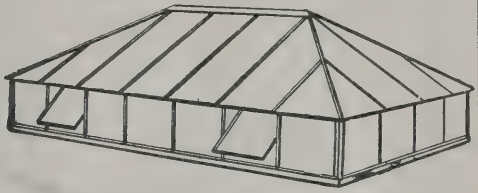

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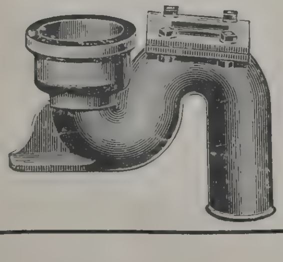

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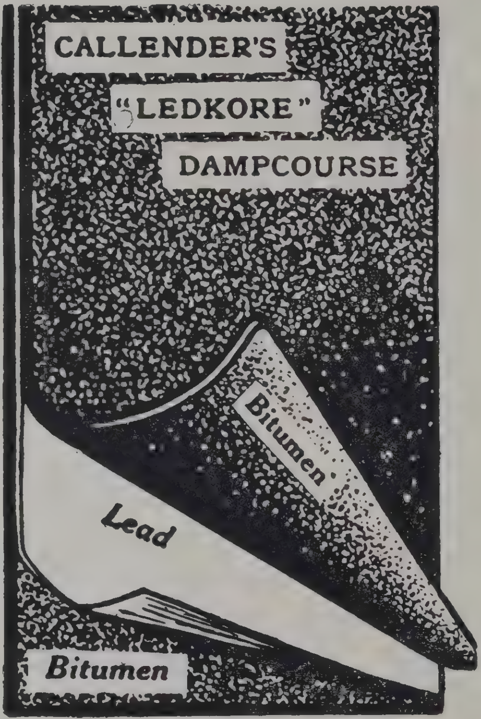

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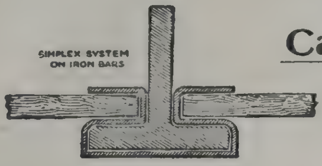

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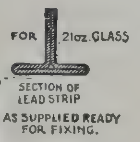

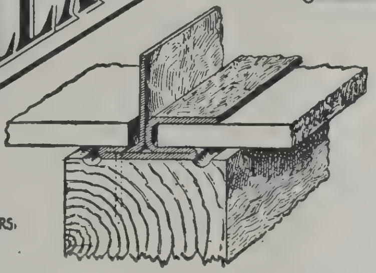

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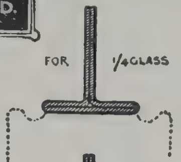

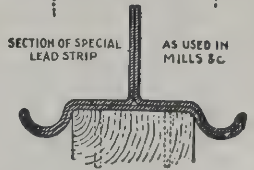

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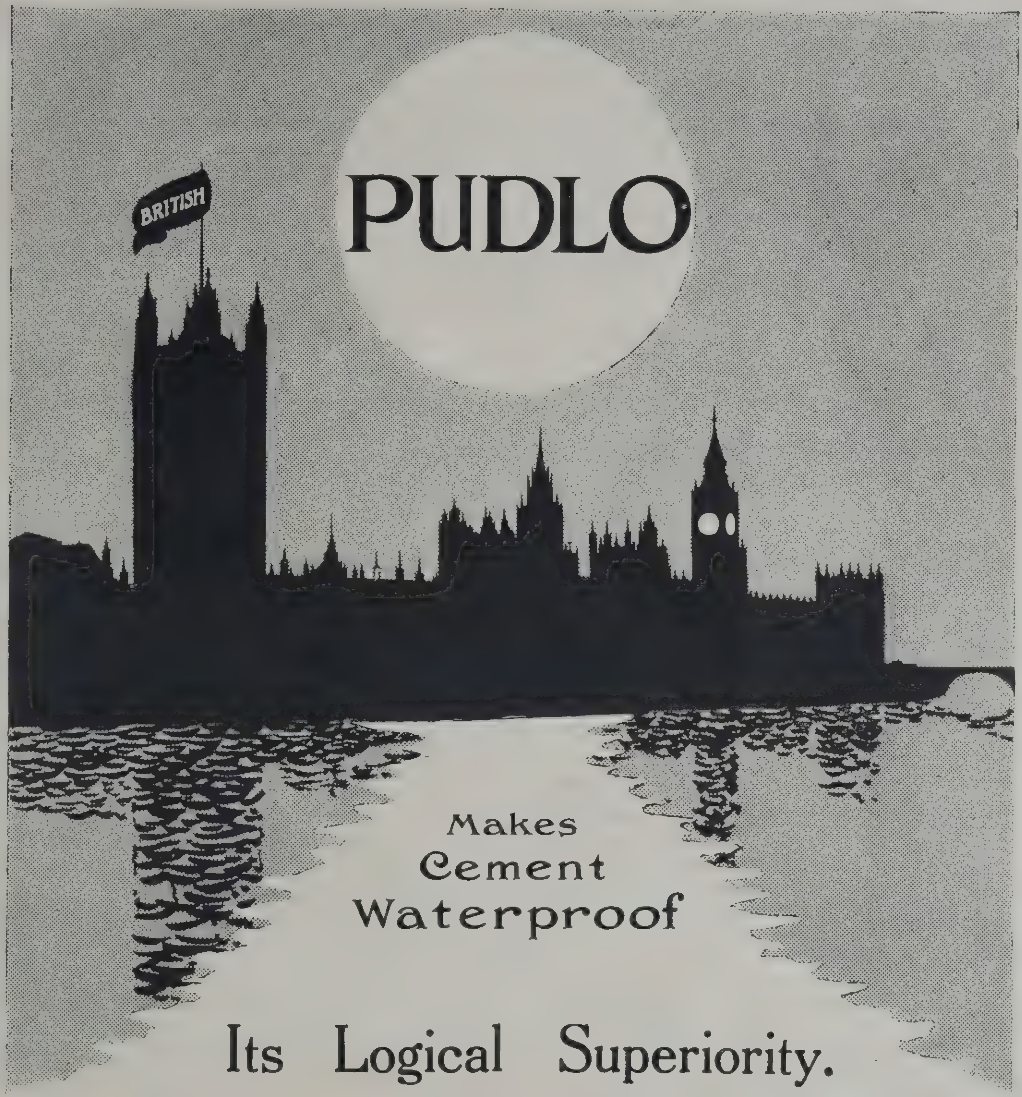

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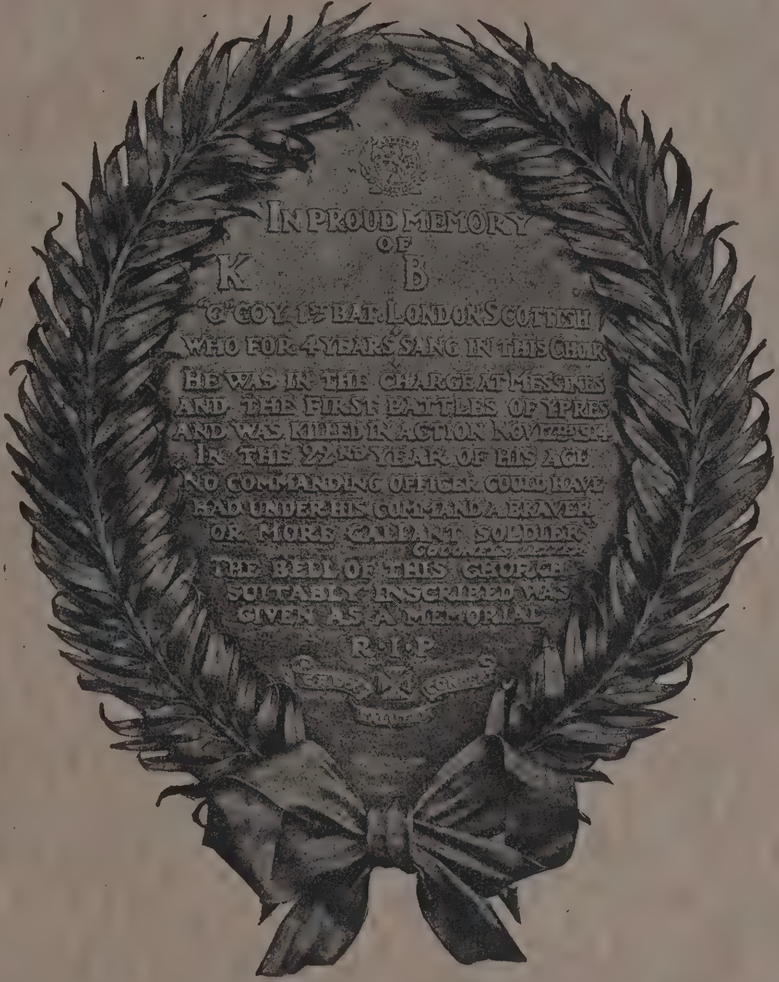
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OF
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WHO FOR 4 YEARS SANG IN THIS CHOIR
HE WAS IN THE CHARGE AT MESSINES
AND THE FIRST BATTLES OF YPRES
AND WAS KILLED IN ACTION NOV [illegible] 1914
IN THE 22ND YEAR OF HIS AGE
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HAD UNDER HIS COMMAND A BRAVER
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COLONEL [illegible]
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